

the women's
the royal women's hospital

RESEARCH REPORT 2009

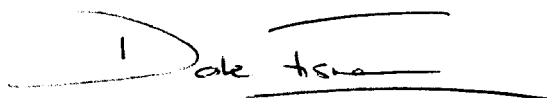
INTRODUCTION

The Royal Women's Hospital has a long and distinguished history of medical research. In recent years, we have reaffirmed our dedication to research by increasing our investment in clinical research leadership and education as well as the strategic development of partnerships in the renowned Parkville Precinct.

Our commitment to excellence and innovation has resulted in the Women's international reputation continuing to grow. More importantly, this commitment has allowed us to continue to deliver successful outcomes for the women, and newborn babies requiring specialist care, in Victoria.

Today the Women's multidisciplinary research directly informs our work in sexual and reproductive health, mental health, maternity, gynaecology, oncology and neonatal care. It is central to the development and enhancement of the world-class services we provide the women and families in our care.

This report on the Women's research activities in 2008 demonstrates the breadth and quality of our research, the Women's role in the training of new researcher's and the continuing international recognition of our laboratory and clinical researchers and their work.



Dale Fisher Chief Executive

**OVERVIEW
FROM
THE
RESEARCH
OFFICE**

Research conducted at the Women's is measurably improving health outcomes for women and babies. As a teaching hospital with a long history of medical research, the Women's is ideal for allowing the direct translation of research findings into clinical practice. Some examples include major roles in the evaluation and clinical introduction of treatments such as vaccines against Human Papillomavirus (HPV) in young women, and of caffeine in very preterm babies.

Highlights of our research year include the awarding of two highly competitive and prestigious grants from the National Health and Medical Research Council of Australia. The first is a Centre for Clinical Research Excellence in Newborn Medicine awarded to a team led by Professors Lex Doyle and Peter Davis, and comprising several other staff from the Women's, including Associate Professor Carl Kuschel, and Drs Jeanie Cheong and Sue Jacobs. The second is a Program Grant awarded to several investigators, including Professor Suzanne Garland and her team from the Women's Centre for Infectious Diseases.

Another pleasing feature is that the number of research publications for 2008 is clearly higher than the previous two years (Figure 1).

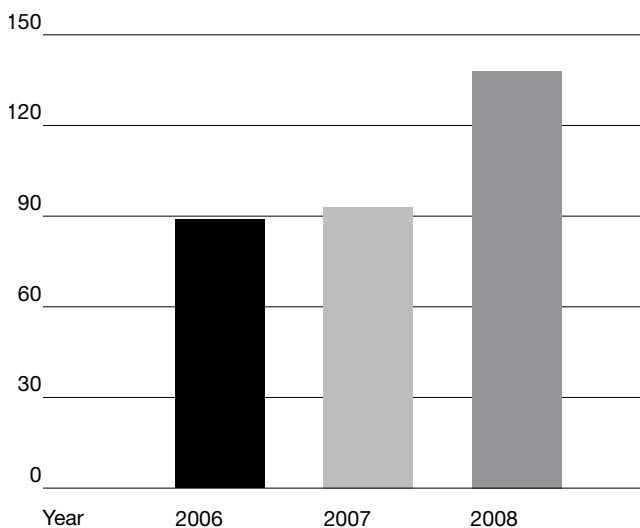


Figure 1. Number of Publications per Year by Researchers from the Royal Women's Hospital, Melbourne. (Source – ISI Web of Knowledge (version 4.4), Web of Science, Thompson Reuters)

Not only are the researchers increasing their output, but the rest of the world is reading and quoting their work – the number of citations of articles by the same researchers from the Women's has increased enormously over the same time (Figure 2).

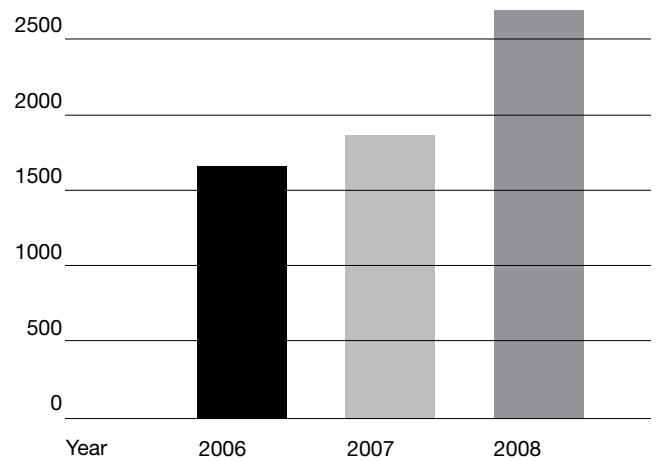


Figure 2. Number of Citations per Year of Publications by Researchers from the Royal Women's Hospital, Melbourne. (Source – ISI Web of Knowledge (version 4.4), Web of Science, Thompson Reuters).

In this report we highlight the work of two past researchers who contributed greatly to the Women's. They are two leading researchers in infectious diseases from early in the 20th Century, Dr Hildred Butler and Dr Arthur Machen ('Bung') Hill.

In addition we also profile the research activities of one of the major groups within the Women's – this year it is the Women's Centre for Infectious Disease.

It is our pleasure to present the third Research Report for the Royal Women's Hospital encompassing activity for the calendar year 2008. We thank all members of the hospital's staff for their support and co-operation in its preparation and completion. In particular, we acknowledge the efforts of Mandie Dell and Tessa Plueckhahn in helping to compile the report.

Professor Jock Findlay

Director, Research

Professor Lex Doyle

Head, Clinical Research Development

**HISTORICAL
PROFILE**

Hildred Butler

Bacteriologist

*Reproduced with permission from the author,
Anne Westmore*

Hildred Mary Butler DSc ARACI (1906-1975) was pivotal to studies during the 1930s of infectious agents killing one woman in every 360 at the Women's Hospital after childbirth or abortion. For over four decades she collaborated with, or was a member of, the hospital's staff, establishing an outstanding Bacteriology Department. Her knowledge of micro-organisms and their effects on human health was exceptional, her career spanning the time before, as well as after, the introduction of antibiotics.

She and Dr Arthur Machen 'Bung' Hill undertook detailed studies of infective organisms, growing them in the laboratory to determine what they were and what treatment might curb their spread. Their seminal paper on the diagnosis and management of 'clostridium Welchii' infections (now known as 'clostridium perfringens') was of international significance. They combined innovative and astute bacteriology with expert clinical judgment to revolutionise the care of women with these dangerous infections, saving many lives and much illness in the process.

Butler's breadth of understanding of maternal infections was invaluable in developing better treatments, in teaching and supervising countless doctors, nurses and bacteriologists in a range of beneficial practices, and in advocacy to an international audience over a period of some 25 years.

Hildred Butler was born on 9 October 1906 at Elsternwick in Melbourne, the daughter of a Victorian wheat farmer, Archie Butler, and his wife, Rose Josephine, née Hancock.

A gifted student, she achieved either first or second place in class throughout her secondary schooling at Lauriston Girls School (1918-23). She was equal dux in her final year, studying algebra and geometry, history and English. A fictionalised account of her relationship with the other dux portrayed Butler as a "nerd" (in modern terminology) with her head in a book and a preference for her own company.

A CAREER IN SCIENCE

Butler gained entry to the University of Melbourne where she enrolled in Science. Like many women of her era who pursued successful careers in science and medicine, she never married in contrast to her co-dux whose post-school path, according to Lauriston archivist Jenny Bars, "was typical of upper-middle class girls of her era: a year in Europe, then back to the family home in Toorak to await marriage and family".

Her university Science results improved after a solid but unspectacular start. She passed all subjects in her first year, and then gained first class honours in chemistry and physiology in both 2nd and 3rd years. On graduating with a Bachelor of Science degree in 1928, she immediately gained employment at the newly-established Baker Institute for Medical Research attached to the Alfred Hospital, Melbourne.

While working at the Baker Institute during the following decade she was strongly influenced by the Director, Dr William Penfold, an English-born (1875), University of Edinburgh trained doctor. Having joined the Baker after a stint as foundation Director of the Commonwealth Serum Laboratories, 1916-26, he teamed an international reputation in preventive medicine, blood analysis and anti-toxin work with wide-ranging experience as a clinician, researcher, teacher and practical bacteriologist.

CULTURES AND COLLABORATION

Butler learned exceedingly well from Penfold, mastering the techniques and skills he taught her in blood-culture work and characterisation of anaerobic bacteria (that is, bacteria that do not require oxygen to survive). By the early 1930s, she was applying these skills to study infective material provided by a number of hospitals, including the Women's. According to the hospital's "Book of Remembrance", she was enlisted to help study a spate of "appallingly frequent severe and fatal infections" among patients in 1931. Comments made subsequently by Dr AM 'Bung' Hill, then a junior member of the hospital's staff, indicate that his long-standing collaboration with Butler started at this time.

Max Swan, who joined the Baker Institute in 1934 as a teenager, recalled Butler as “an exacting, awe-inspiring lady whose penetrating blue stare, focused through large-frame spectacles earned her the nickname ‘the Praying Mantis’”. Swan, who went on to study medicine, said that he and the other “juniors also held that she conducted human sacrifice at the full moon”. Notwithstanding these colourful descriptions which suggest something of Butler’s serious and at times autocratic demeanour, Swan acknowledged her as “an outstanding bacteriologist and serologist”.

In 1937 Butler dedicated her book, *Blood Cultures and their Significance*, to the inspiring Penfold whose “steadfast devotion to scientific truth and his never-failing help and encouragement” deeply impressed her. In the Preface, Penfold returned the compliment, saying the book gave him “peculiar pleasure”. Butler’s was the third monograph from the Baker in a series of publications, but the others had “been written by people who were experienced in their subjects when they associated themselves with the Institute”. Butler, on the other hand;

. . . has spent the whole of her bacterial life in the services of the Institute, so that in a very real and complete sense, this is a Baker Institute monograph.

Penfold also voiced his pride in the high standard of Butler’s work. When she joined the Baker Institute, only about 10% of all attempts to isolate bacteria from the bloodstream using culture techniques were positive. Over the years she had made a major difference, doing all the blood cultures the Alfred Hospital required and lifting the percentage of positive results to 25-30%. Because of “her devotion and success in this work”, Penfold had suggested she write the book.

In his view, the average clinician underused blood cultures for diagnosis, prognosis or to help in deciding the best course of treatment because they doubted their accuracy, blaming technical defects for this situation. If the methods described in Butler’s book were used, fewer false negative results would occur, he said. A second reason he proffered for why blood cultures were under-used was the absence of a succinct, yet reasonably complete book on the subject, a problem Butler’s book overcame both for bacteriologists doing technical work, and clinicians who interpreted the results.

TRIUMPHS AND TRIBUTES

In 1938, Butler was appointed the first bacteriologist at the Women’s Hospital where she remained for the next 33 years. As detailed in the *Book of Remembrance*, she and Hill continued to work together for decades, developing an international reputation for their insights into infections that complicate childbirth and abortion. Their major contributions were to increase understanding of, and rapid diagnosis and treatment of, anaerobic infections; and to prevent staphylococcal cross infection. They collaborated on numerous articles in the medical literature and Butler herself wrote others on bacteriological and haematological topics which formed the basis of her successful application for a Doctor of Science (DSc) degree from the University of Melbourne in 1946.

Dr Gytha Betheras, a member of the hospital’s medical staff for many years from 1957, found Butler a very committed and competent colleague who was easy to work with, thoughtful and perceptive. She recalled that when suspicions about a possible infection with the dangerous “clostridium Welchii” bacteria arose after hours, Butler would be informed immediately whereupon she would promptly drive into the hospital from her home at distant Ferny Creek and remain until she’d performed the relevant tests on the patient concerned, advised on the most appropriate treatment, and checked on the patient’s progress.

World-renowned research biochemist, Professor James B Brown, who joined the hospital in 1963 regarded Butler as “quite a force around the hospital”. He recalled her taking stands on infection control despite meeting “some resistance” from a sub-section of the medical staff who considered they should have more involvement in the matter. Other sources confirm that she put some noses out of joint by her reluctance to provide details of the organisms involved in particular cases of infections, providing only her recommendations for treatment.

In 1971, she retired from the Royal Women’s Hospital having reached age 65 and having established a Bacteriology Department with a staff of 15. Indefatigable to the end, she promptly announced she had no intention of quitting research, as she had become extremely interested in chronic kidney infections and hoped to work

part-time in that field. "So I'm probably giving up work to cart bricks," she told the Melbourne "Herald".

She was soon listed as a Senior Associate in Medicine at the Royal Melbourne Hospital, conducting research into kidney infections in the renal unit with leading kidney physician, Dr Ken Fairley. Dr Fairley's wife, nephrologist, Professor Priscilla Kincaid-Smith, described Butler as "very definite in her opinions, very intelligent ... and very impressive as a research worker". She continued with the research until close to her death from cancer in April 1975 despite great physical discomfort.

A few months later Hill used a retirement function for another staff member to reminisce about Butler, "a very wonderful bacteriologist who died recently";

I would think that in her class she had no equal in the world. She is among the immortals. She came here in 1938 and found out for Australia what the conditions are ... that complicate childbirth and abortion. They are quite different from the conditions that have this effect in other countries. In 1941 she developed a wonderful (smear) test. It used to take in those days with good bacteriology and a first class unit two or more days to culture a germ that was killing a woman. She couldn't pick these damn things quick enough. These women were dying in a few hours. She sat down and, with a stroke of genius, and with special staining methods ... she could decide in 30 minutes what this particular infection was. That's been the basis of all our success in infection since that day.

Matron Betty Lawson used the occasion of her retirement function in 1976 to praise Butler and Hill, together with Dr Jack Laver, a former Medical Superintendent of the Hospital;

I'd like to pay a tribute to Dr Arthur Hill, Dr Hildred Butler and Dr Laver the members of the hospital's first Infection Control Committee (in 1957) for their excellent contribution to this hospital and to the world in the control of obstetric infection from 1931 to 1960. In 1936 a management basis was laid down for 'clostridium Welchii' infections and now the incidence is very limited. Dr Butler

developed a quick smear test which enabled us to diagnose the ladies with this infection very quickly, and so they were well looked after. The active interest of this trio in infection control had a tremendous influence on the practice (of midwifery) in this hospital.

Hildred Butler made a major contribution to the health of countless women. As a tribute to her memory, Hill commissioned a portrait of her by artist Alan Martin in 1967 which he donated to the hospital some years later. In 2003, the hospital recognised her legacy in a formal way by establishing the Hildred Butler Fellowship in Clinical Microbiology and Infectious Diseases worth \$40,000.

Sources; Attwood, H.D., 'Hildred Mary Butler (1906-1975), Microbiologist' in John Ritchie (ed), "Australian Dictionary of Biography", 13, Melbourne University Press, 1993, p. 320; Robin, A. deQ, 'William James Penfold (1875-1941), Bacteriologist' in John Ritchie (ed), "Australian Dictionary of Biography", 13, Melbourne University Press, 1993, pp. 197-198; Hildred Mary Butler academic record, The University of Melbourne; personal communication Jim Brown, Gytha Betheras, Denys Fortune, Jenny Bars and Priscilla Kincaid-Smith to Ann Westmore; Max Swan, 'The Baker Institute Long Since, From Below', in Rod Andrew and Alf Barnett (eds), "In Their Day; Memoirs of Alumni [of] The Baker Medical Research Institute", Hyland House, 1992; Anon, 'A Very Mad Party', "The Lauristonian", December 1923; A.M. Hill and David Leslie, 'Hildred Butler', "Book of Remembrance", Royal Women's Hospital, II, 1975; Jean Cramer's farewell function, accession number to be added; Betty Lawson's farewell function, A1993/3/76; Ann Pilmer, 'Leaving the ward', "The Herald", 8 October 1971; Anon., 'Distinguished doctor dies of cancer', "The Age", 16 April, 1975.

HISTORICAL PROFILE

Arthur 'Bung' Hill

Obstetrician and gynaecologist,
Medical Superintendent, researcher,
educator

*Reproduced with permission from the author,
Anne Westmore*

Arthur Machen ('Bung') Hill OBE, MD BS DGO FRCS FRCOG FAustCOG FTCS (1903-1979) helped to substantially improve the survival rates of women in Victoria following childbirth and complications associated with miscarriage and abortion. Through collaborative research undertaken in the 1930s with Hildred Butler, a bacteriologist then working at the Baker Medical Research Institute, he helped identify the infectious agents capable of killing women of childbearing age within a couple of hours of causing symptoms of illness.

The collaboration produced findings of international significance and was the springboard for Butler's transfer from the Baker Institute to the Women's Hospital in 1938 and her subsequent development of a smear test to identify life-threatening infectious agents within 30 minutes, followed by the introduction of targeted, specific treatment.

After serving as the hospital's Medical Superintendent, 1933-35, Hill was appointed a member of the honorary gynaecological staff, 1938-63. During this time, he taught medical and nursing staff and students, and contributed to clinical practice through infection control, family planning, artificial insemination, and an influential appraisal of cervical cancer treatment. After retiring in 1965, he was appointed an honorary consulting surgeon, and continued in private practice.

'Bung' Hill was born on 22 October 1903 at Castlemaine, central Victoria, the son of Dr Arthur Machen Hill, at one time a Resident Medical Officer at the Women's Hospital and, later, Resident Surgeon at the Castlemaine Hospital, and his wife, Emily Maude née Johnson. He was the third of four siblings, and the second of three boys. He was educated at the Castlemaine South State School and Castlemaine High School until 1918 when he was admitted to Wesley College as a day student on a scholarship. From there, he gained admission to the University of Melbourne and studied medicine (graduating 1927).

The origin of the nickname, 'Bung', is uncertain. RWH Honorary Historian, Dr John Natrass, was told it stemmed from sounds Hill made as a child when playing with a pop-gun in the front garden. A friend for many years (thought to be Dr Bill Cook) suggested it pertained to backyard cricket when a kerosene tin was used as a wicket. ("Bung good at it so tin-arse, bung-arse, and then bung.") Whatever its origins, the nickname stuck and became so strongly associated with him that it created difficulties for people trying to locate him via the telephone book.

HARVESTING RICHES

Dr Donald Lawson, a contemporary from Castlemaine who, like Hill, became Medical Superintendent at the Women's Hospital, remembered their childhood amid "the rough, austere terrain of Castlemaine" as one of "rich veins ... for those who would seek them". Lawson said that;

One rich vein Bung struck was a spinster schoolteacher – Jessie Robertson – a great lover of, and exponent of the English language, both written and spoken. Bung's father wrote a book of verse, so there was something in the genes, but Jessie Robertson began a cultivation of it that Bung has carried on to the present day.

It seems that Robertson contributed to him becoming one of the hospital's "few superlative speakers" with a style Natrass characterised as milking the outrageous word, image or action and delivering sentences in a clipped, rapid-fire intonation:

Bung as a lecturer, had the flow that a lecturer must have and the brain to use it and to keep feeding it material. He employed words like vivid, dramatic, colourful and exotic which, if you stop to think about it, applied to what he said, the way he said it, and indeed to him who said it. As well as bravuras (sic), he was capable of meticulous, terse wording (and) economy of expression, which he often rehearsed carefully.

Hill's ability with words also made an impression on Dr Harold Attwood, who was interviewed by him for the position of RWH Assistant Pathologist in London in 1960. Attwood described Hill as having;

a great personality, widely read and with an ability to write well...He had an enormous vocabulary, but a curious penchant for swear words. To his friends these words added pungency to his talk, but could distress others.

He was “a character” around the hospital, notorious for his unpunctuality as well as for his quick wittedness and for the value he placed on the same qualities in others. Attwood, having turned up late for his interview in London, subsequently attributed his success in gaining the RWH position to his lack of punctuality. While often running late himself, Hill rarely failed to keep a commitment once made. On one memorable occasion when he missed giving an 11am lecture at the hospital to medical students, he arrived instead at 1am the day after the day after he was supposed to give it. According to Natrass, “We were hauled down to the labour ward in our pyjamas to be lectured,” the labour ward being the warmest place in the hospital on a cold winter’s night.

THE QUEST OF A LIFETIME

After graduating in medicine, Hill completed a comprehensive resident medical officer training at the Alfred, Children’s and Women’s Hospitals. His successful completion of a Melbourne MD (Doctor of Medicine degree in 1931) suggests a strong interest in clinical research and a desire to gain solid foundations for what became a life-long quest to identify the causes of obstetric infections and to develop ways of controlling them.

In 1933, his first year as Medical Superintendent of the Women’s Hospital and the year in which he obtained his Diploma in Obstetrics and Gynaecology, 15 women died due to infections after giving birth, and 25 after miscarriages or abortions. The following year, the combined death toll was even higher, totalling nearly 50.

Obstetric mortality rates in Victoria were at alarming levels (being 61 per 10,000 deliveries in 1934, 30 times higher than in 1971) and it was a common occurrence in wards to see women having;

sweats and rigors, high fever and tachycardia, pallor and collapse, jaundice and cyanosis, distension and dyspnoea, foul and purulent discharges, anuria, incontinence, delirium, and the muffled movements of the mortuary trolley.

The burdens of nursing and medical care, often without hope, were appalling, he said years later.

Between 1931 and 1937, Hill and Hildred Butler, a young bacteriologist working at the Baker Medical Research Institute, identified four bacteria that were responsible for most of the serious infection complicating childbirth, miscarriage and abortion among women admitted to the hospital. They described the agents – ‘clostridium Welchii’ (now known as ‘clostridium perfringens’, ‘haemolytic streptococci’, ‘anaerobic streptococci’ and ‘staphylococcus pyogenes’ – as ‘the most colourful and dramatic infections in obstetrics’.

The speed with which ‘clostridium Welchii’ could kill (a couple of hours) made swift diagnosis and specific treatment imperative. Between 1931 and 1960, the hospital cared for some 200,000 women who gave birth or who were treated following miscarriage or abortion. A total of 429 died from the four infectious agents with ‘clostridium Welchii’ the most dangerous (accounting for 147 deaths), followed by ‘haemolytic streptococci’ (101 deaths), ‘anaerobic streptococci’ (59) and ‘staphylococcus pyogenes’ (22).

In 1935, addressing the Royal Society of Medicine in London on ‘Post-abortal and Puerperal Gas Gangrene’, Hill reported on 30 cases diagnosed and treated at the Women’s Hospital during the two years that he was Medical Superintendent. It was the largest personal series published to that time and, in the pre-antibiotic era, it was regarded as a major advance.

In his lecture he described, for the first time, the six chief clinical varieties of ‘clostridium Welchii’ infection in women ‘each as distinctive as a primary colour in the solar spectrum’. Four of these six types were responsible for deaths in women, which occurred after progressive haemolytic jaundice degenerated into profound collapse, and uterine gangrene accompanied by excruciating pain in the uterus or muscles. The report of his address, published in the ‘Journal of Obstetrics and Gynaecology of the British Empire’ in 1936, won him the British Medical Association’s biennial award, the Katherine Bishop Harman Prize in Obstetrics. While he was overseas he also secured the degrees M(R) COG in 1935 and FRCS (Edinburgh) in 1936.

During the 1940s and 1950s much of the infection control work that Hill and Butler pioneered came to fruition at the Women’s and at other hospitals throughout Australia. Bruce Mayes, Professor

of Obstetrics and Gynaecology at the University of Sydney, said that while Sydney had its famous bridge and beautiful harbour, Melbourne had Hill and Butler. Together with Dr Jack Laver, they formed the hospital's first Infection Control Committee (established 1957) which challenged numerous long-held practices and was a model for similar committees in other hospitals.

Dr Gytha Betheras, a member of the hospital's medical staff for many years from 1957, said that Hill and Butler formed a remarkable team, combining clinical judgment and expertise with innovative and astute bacteriology. They were totally available to staff whenever a case of 'clostridium Welchii' was suspected or diagnosed and, due to their combined efforts, management of the infection was revolutionised. She said they saved many lives and much morbidity firstly by developing faster diagnosis and better treatments, secondly by teaching and supervising countless doctors, nurses and bacteriologists in improved practices, and thirdly by their international advocacy of new approaches to controlling obstetric infection.

LATER INTERESTS

Apart from obstetric infection, Hill's other major clinical interests were contraception using the intrauterine device known as the Gräfenberg ring; artificial insemination to treat infertility; and cancer surgery. In work with close friends, Drs Graham Godfrey (cancer surgeon), and Kevin McCaul (anaesthetist) he reappraised the treatment of uterine cancer and, in particular, the acceptability of the Wertheim operation.

In 1966, the year after his retirement from the hospital, he was awarded the degree of Master of Gynaecology and Obstetrics (MGO) and, for many years, he was the senior Fellow of the Royal College of Obstetricians and Gynaecologists in Victoria.

He was short, slim and bald-headed with long sideburns, and was known for his natty dress and unfailingly alert and twinkling eye. His sense of perpetual youthfulness was perpetuated by having a family (a son and a daughter) in his fifties, after marrying Czechoslovakian former ballerina, Mrs Ilona Semark.

As time went on, his gregariousness became legendary, with Nattrass praising him for helping develop the dining-together habits of the hospital's staff. Fittingly, when he retired in 1965, he shared a 'wake' with Drs Colin McDonald and Bill (JR) Rawlings, during which Lawson gave a memorable homily.

FINAL YEARS AND A LASTING LEGACY

He enjoyed an active retirement, continuing in private practice and dining regularly with colleagues such as Drs Frank Forster and Bryan Gandevia. A regular attendee at hospital functions, he was renowned for removing his hearing aid when bored with a speaker.

He experienced several health crises in the last two decades of his life, and died in his sleep on 20 January 1979 at his Mt Eliza holiday home. Afterwards, his friends gathered annually for the 'Bung Hill luncheon' at which some of his provocatively ribald phrases and challenging assessments of colleagues were aired.

As well as a very substantial clinical legacy, his contribution was lasting in other ways as well. Nattrass considered that if the function of a doctor was to cure sometimes, relieve often and comfort always, Bung Hill did this more than most, and not just to his patients but to his friends and colleagues, both figuratively and actually.

Many suggestions were made about how to honour him after his death, and at least one was acted on. In 1980 a plaque was unveiled in Ward 53 which bore the following inscription;

To commemorate the services to the Royal Women's Hospital of Arthur Machen Hill (affectionately known as 'Bung') OBE MD BS MGO FTCS(Ed) FRCOG 1903-1979, Member of Honorary Medical Staff 1938-63.

From 1936 a world authority on puerperal and abortal infections, especially those due to clostridium Welchii. He also re-appraised the place of radical surgery in the treatment of carcinoma of the cervix.

His family also donated to the hospital a portrait of him by artist, Alan Martin.

Sources; HD Attwood, 'Recollections of Arthur Machen Hill' delivered at his funeral on 26 January 1979 (typewritten); Dr John Natrass; 'Dr Arthur Machen Hill – Obituary', "RWH Bulletin", 12, 1, 1979, p. 1; Arthur M Hill, 'The RD Fetherston Memorial Lecture; Why Be Morbid? Paths of Progress in the Control of Obstetric Infection, 1931 to 1960', "Medical Journal of Australia", 1964, I, pp.101-111; Drs Donald Lawson and John Natrass, 'Reflections on Arthur Machen Hill on the occasion of a meeting held on 31 January 1979 at the College of O&G following his death on 20 January 1979' (typewritten); Notes from a 'Bung' Hill luncheon, archived at the RANZCOG; Donald Lawson, Speech in 1965 held at a function to honour three retiring doctors, Colin McDonald, Arthur "Bung" Hill, and Bill Rawlings (typewritten); Freda Irving, 'They planned to be wed secretly', "The Argus", 24 October 1951; Karen Kissane, 'Top doctor and a top character', "The Age", 25 January, 1979; Death notices, "The Age", 25 January 1979; 'Obituary Arthur Machen Hill', "Medical Journal of Australia", 1979, II, p.33; Anon, 'Gynaecologist of world repute dies', "The Age", 23 January, 1979; "Victorian Year Book", 1973, p.541; personal communication, Gytha Betheras, Bryan Gandevia and Prue Forster to Ann Westmore.



**PROFESSOR
WOMEN'S
CENTRE
FOR
INFECTIOUS
DISEASES**

The Women's Department of Microbiology and Infectious Diseases (WCID) conducts clinically based research, as well as cutting edge molecular diagnostics for detection of infections as they relate to Obstetrics, Paediatrics, Gynaecology and Neonatology, as well as being a resource for clinical microbiology, infectious disease and infection control.

Professor Suzanne Garland leads the team of nine research scientists, an epidemiologist, two project officers and five clinical research nurses, whilst A/Prof Sepehr Tabrizi is the senior scientist leading the laboratory team.

New home at Bio 21, and the launch of WCID

In July 2009, WCID celebrated its move to Bio 21 Institute, part of University of Melbourne, and situated right next door to the new Royal Women's Hospital. The official launch was by the Royal Women's Hospital CEO, Dale Fisher; Prof. James Angus, Dean, Faculty of Medicine Dentistry and Health Sciences, University of Melbourne; and special guest from University of Cambridge, Professor Margaret Stanley, Professor of Epithelial Biology at the Department of Pathology of the University of Cambridge, and who holds the prestigious award of OBE, and is an elected member of the Academy of Medical Sciences.



From left to right: Professor Margaret Stanley, CEO Dale Fisher, Professor Suzanne Garland and Dean Professor James Angus

WCID is the first clinical group to be centred in Bio 21 Institute with affiliations to University of Melbourne Faculty of Medicine Dentistry and Health Sciences and the Department of Obstetrics and Gynaecology. As a centre of excellence on women's health, especially in the fields

of neonatal and infectious diseases research, including in reproductive and sexual health, WCID conducts clinical research, as well as cutting edge molecular diagnostics. Key research areas of focus include cervical cancer, sexual health and mother-to-baby infections, with emphasis on providing evidence for changes that may translate into clinical practice, affecting patient health.

The launch of WCID was coupled with a two day research conferences: the ongoing annual national meeting of "Cervical Cancer Not Yet Beaten and at What Cost?", which is aimed at understanding HPV, HPV vaccines, cervical and vulvar cancers.



WCID staff members with CEO Dale Fisher on the day of the launch at Bio 21 atrium

Research activities

Currently the group holds five NHMRC project grants, a recently acquired NHMRC programme grant, as well as funding from the Cancer Council, CRC indigenous health Northern Territory Government, and industry-initiated clinical vaccine trials, totalling over \$9 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 two of which are ongoing; the phase 3 trials, which have been completed for the quadrivalent vaccine was published in the New England Journal of Medicine, and was led as first author by Professor Garland.

- Evaluation of molecular markers that can predict disease recurrence after treatment of cervical abnormalities;
- Assessment of prophylactic cervical vaccine effectiveness in the Australian population by determination of HPV genotypes prevalence in the Australian population (pre and post vaccination). The Women HPV prevalence Indigenous, Non-indigenous, Urban, Rural, Study group (WHINURS) project will form a valuable baseline data bank against which vaccine effectiveness will be able to be measured and in conjunction with the newly developed HPV vaccine register, cervical cancer registries and cervical cytology registries. There are few countries in the world that will be able to perform this. Australia therefore will be in a lead role here. Our laboratory has just completed testing and analyses of the WHINURS HPV study HPV genotyping data/results from 2,637 participating women has been analysed and results are being prepared for publication and presentation.
- A recent study funded by Cancer Council for Victoria was initiated with the aim of conducting a re-evaluation of circulating HPV genotypes, primarily aimed at monitoring the potential population impact of the current HPV vaccination in this region (we are now in our fourth years cohort of vaccination), and for the design and/or direction of future HPV vaccine strategies
- Evaluation of genetic and environmental factor responsible for development of cervical cancer. This study is conducted using a novel twin model



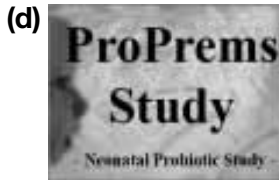
The Royal Women's Hospital is conducting a large twin study involving women over 30 years of age who have had Pap screens within the past ten years. The study, researching the link between HPV and cervical cancer, began recruiting Victorian participants in 2007 and is now recruiting women in other states. Women are asked for their permission for the study to access their historical records from relevant Cervical Cytology Registries in each state, and then the actual microscope slide from past Pap smears are retrieved in order to conduct HPV analysis. Women are also asked to complete

a short questionnaire to investigate environmental and lifestyle factors and other risks for cervical cancer. The results of twin pairs will be compared and the twins classified into three sets – twins who are both negative for cell changes within a 10 year span, twins who are both positive for cell changes within a 10 year span and twins where one has had cell changes and the other has not. We anticipate that research findings will contribute to better understanding the determinants of cancer from genital HPV infection. A recent launch of the study was conducted in conjunction with the Australian Twin Registry at the Royal Women's Hospital.



Professors John Wark (left) and Suzanne Garland (right) at the launch of the twin study with some of the trial participants.

- (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 antenatal patients 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 have currently evaluated 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. This translates into clinical practice in advising, what is most appropriate chemoprophylaxis for those with Beta lactam sensitivity.



(d) 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. To date we have just over 500 babies recruited to the study.

Premature infants nursed in intensive care units acquire their gastrointestinal microbial flora preferentially from the intensive care environment rather than sustaining bacteria acquired from their own mother's vaginal canal, skin surface and milk. Consequently, intestinal colonisation with beneficial bacteria is delayed in premature infants, being influenced by mode of delivery, antibiotics given to the mother prenatally as well as to the infant postpartum. The concept that the colonising microbes have the potential to be pathogenic in premature infants, particularly as they are immature immunologically, has logically led to the proposal that supplementation with live non-pathogenic bacteria (probiotics) that "normalize" the microenvironment, may reduce sepsis, necrotizing enterocolitis (NEC) and death. Probiotic mixtures may reduce NEC and death in preterm infants <1500g in some settings. While very encouraging, it is far from clear whether specific strains and doses of probiotics, when added to mother's own fresh breast milk, commenced soon after birth, will add value to outcomes experienced in highest quality care settings. The duration of treatment required for reliable benefit is also unclear.



(e) Young Female Health Initiative:

The period from 16-25 years of age is critical in a woman's life, as behaviours and lifestyle choices are established that lay the foundation for future health patterns and impact on quality of life and productivity in later life. There are also many important new life transitions during this period that affect current and future health outcomes. In addition, young women are particularly affected by major recent changes in society, lifestyle and environment. Yet, young women have been underrepresented in population-

based studies of health, as they are highly mobile and their recruitment and retention is challenging.

The Young Female Health Initiative (YFHI) is an exciting and ambitious new project that will follow a group of 2000 Victorian women aged 16-25 years for 4 years, tracking their lifestyle, behaviour and physical and mental health. This study will give us important new insight into the health patterns of young women today, and will enable the development of education and intervention tools and health policies to improve health and wellbeing throughout their lives. YFHI spans key mental and physical health domains, and investigates how they interrelate:

- Health behaviour: nutrition and physical activity
- Cardiovascular health
- Obesity and metabolic health
- Sexual and reproductive health
- Bone and joint health
- Mental health
- Indigenous health

This study will make novel use of cutting-edge internet, mobile and communication technologies to facilitate recruitment and retention of young women, data collection, education and intervention. YFHI will explore the potential of modern communicative technologies to change the way industry and health providers cater to the health needs of young women. Another important and novel aspect of this project is the investigation of inter-linkages between determinants of health outcomes across multiple health domains that previously have not been comprehensively combined under a single study. Results and findings will be translated into educational messages, interventions, health guidelines and policies to encourage healthy living and improve long term outcomes for Australian women.

NHMRC PROGRAMME GRANT

This grant between University of Melbourne and Sydney is entitled "Sexually transmitted infections: Causes, consequences and interventions" and aims to examine and result in better ways to prevent and treat sexually transmitted infections. The program brings together a multidisciplinary

team of Australian leaders in research on sexually transmitted infections, spanning clinical, epidemiological, laboratory and biomathematical disciplines

International activities



WHO HUMAN PAPILLOMAVIRUS (HPV) LABORATORY NETWORK (LABNET)

Our laboratory at the Royal Women's Hospital is one of nine regional HPV Reference Laboratories across the globe as part of the WHO global HPV LabNet. The aim of the WHO LabNet is to contribute to improving the quality of laboratory services for effective surveillance and monitoring of HPV vaccination impact, through enhanced, state-of-the-art laboratory support; an initiative supported by the Bill and Melinda Gates Foundation. A major objective of the HPV LabNet was to harmonize and standardize laboratory testing procedures (HPV DNA and antibody detection) worldwide to support consistent laboratory evaluation of regional disease burden and monitor HPV vaccine performance, which has been facilitated by

- Implementation of validated, standardized laboratory procedures;
- Development of quality assurance systems and proficiency testing, including use of international standard reagents and operating procedures;
- Training personnel;
- Providing a network for surveillance.

Our laboratory has also been leading communication between the LabNet and external bodies through development of a six-monthly HPV LabNet newsletter, thereby facilitating dissemination of the LabNet activities to a global audience; Participation in international collaborative studies (proficiency and confirmatory testing) towards HPV assay standardization and establishing International Standards / Reference Reagents for such assays; Implementation of Quality Assurance (QA) and Standard Operating Procedures with all HPV testing; including development of QA HPV genotyping panels for laboratories in the Western Pacific Region via proficiency studies, in collaboration with Royal College of Pathologist of Australasia, Asia Oceania research organization on Genital Infections and Neoplasia, and WHO/HQ; Sustain capacity for performing HPV serology genotyping assays to ensure the capacity

of supporting labs in the Asia-Pacific region through training and technical transfer; and will continue to perform long-term monitoring of vaccination impact in Australia and Asian/Pacific countries where HPV vaccines may be introduced in the near future, and liaise with international labs in these regions for HPV testing, education, technical support and establishment of laboratory contacts active in HPV surveillance.

ASIAN-OCEANIA RESEARCH ORGANIZATION ON GENITAL INFECTION AND NEOPLASIA (AOGIN)

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 was the inaugural President of this organisation and Dr Geoffrey Tan, the permanent secretary. AOGIN meetings are held biennially with the 2007 meeting being held in Korea, where over 500 clinicians and scientists from the region attended. In 2010 thousand participants attended the meeting in Delhi, India.

Collaborative research has eliminated from within AOGIN with peer review publications emanating from this work. AOGIN guidelines on cervical cancer vaccination, plus screening and prevention strategies are currently being developed as a guide for the region.

POST GRADUATE STUDENTS

Seven PhD students are continuing their post-graduate research

PUBLICATIONS

Overall, 350 peer reviewed publications have been published with more than 42 in 2008 and 2009.

PRESENTATIONS

The department has presented research data at 59 scientific and clinical meetings in 2008 and 2009, of which 20 were national and 40 were international meetings. Of these presentations, 38 were invited lectures.

**REPORTS
FROM
RESEARCH
GROUPS**

Human reproductive biology

Reproductive Services at the Women's Hospital and Melbourne IVF care for a diverse population of patients with diverse fertility-related concerns. Accordingly, we place a large focus on research to facilitate and improve fertility outcomes for our patients. The full range of research activities at Reproductive Services at Women's and at Melbourne IVF reflects clinical, laboratory and psychosocial research interests in our unit.

Our unique contribution to several key areas of research is also expanding, particularly in the important work of Dr Debra in fertility preservation, and also the work of our Preimplantation Genetic Diagnosis team, led by Dr Leeanda Wilton. Dr David Edgar and his team continue to focus on how to identify and select embryos with the best implantation potential, and this important work has practical implications, as well as the potential to improve our results with single embryo transfer.

Professor Gordon Baker's contribution to both Andrology and clinical research, and his tireless mentoring and advice to junior researchers, provides the backbone of our research, Professor Baker and Dr John McBain both drive our clinical and epidemiological research endeavours. Dr Leeanda Wilton and Dr John McBain also continue to drive our Preimplantation Genetic Diagnosis research and ensure that we are at the forefront, particularly with the emergence of new technologies.

We are also focusing on investigator-initiated and led projects. Dr Kate Stern leads an active research program, both clinical and scientific, in the important area of fertility preservation. The research focuses on measures to help protect ovarian function during chemotherapy or other gonadotoxic therapies, and also on ways to preserve mature oocytes or ovarian tissue prior to chemotherapy, radiotherapy or surgery.

Our long standing research program in the endocrine and metabolic field of research concentrates on improving the gynaecological, reproductive and general health for women with polycystic ovary syndrome (PCOS). The program particularly focuses on the development of permanent lifestyle changes for patients with endocrine metabolic disorders. Increasingly we also have a psychosocial research focus in this area. The Big Girls Group (BGG) facilitates

this research. It 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. A decade of the results from the program show lifestyle modification is an effective approach, and should be considered as the first line treatment for overweight women with infertility associated with PCOS.

The acknowledgement of the importance of psychosocial research has been associated with the appointment of two new counselors with specific research experience and enthusiasm, as well as the allocation of resources and time to these counselors specifically to focus on research.

The culture of commitment to research is permeating Reproductive Services at the Women's and Melbourne IVF with increasing enthusiasm from every department to become involved in research activities.

The calibre of our research is reflected by the international recognition it receives, and also in the enthusiasm of our team for continuing to embrace the challenges of research in reproductive medicine. The combination of highly regarded specialist clinicians and scientists, with a strong, capable, well-staffed and motivated research department, ensures that we will continue to produce important research at Reproductive Services and Melbourne IVF.

REPRODUCTIVE BIOLOGY RESEARCH

Dr David Edgar, Scientific Director

Much of our research in the area of human reproductive biology is directed towards improving outcomes from the application of IVF and other forms of assisted reproductive technology in the treatment of subfertility. The fundamental challenge is to improve the pregnancy rate from transfer of in vitro generated embryos while at the same time minimise the occurrence of multiple pregnancy. To achieve this aim we must develop increasingly sophisticated methods to identify the embryo(s) with the highest pregnancy potential prior to transfer and also develop efficient

technology for embryo cryopreservation to ensure that embryos which are not transferred immediately are available for subsequent treatments. The summaries I and II below illustrate our continuing contribution to research in both these areas.

Our interest in cryopreservation of reproductive potential also extends to the female gamete (egg), an area in which Dr Debra Gook has played a pioneering role. Work in this area has been expanded to include critical evaluation of new techniques involving ultra rapid vitrification of human eggs (III). Studies to further evaluate the transplantation of cryopreserved ovarian cortex are also essential to ensure progress in the application of technology designed for fertility preservation in young women undergoing cytotoxic therapies (IV). Evaluation of markers of follicular health in ovarian tissue requires an understanding of the expression of key functional elements of the human ovarian follicle and this work continues in parallel with the ovarian tissue cryopreservation studies (V).

I – Metabolomic profiling of human embryos

Kristi Gluschenko, Stacey Gwilym, Stephanie Stiehl, David Edgar

While carefully timed observations of early developmental markers such as timing of entry in to syngamy and subsequent rate of cell division can provide important prognostic information when selecting the optimal embryo for single embryo transfer, the possibility of additional non invasive markers which assess embryonic function remains very attractive. In collaboration with colleagues in North America, we have been assessing a technique known as Metabolomic Profiling to explore the possibility that it may be able to identify embryos with enhanced implantation potential. Near infra red spectroscopy can identify chemical alterations caused by embryos in tiny volumes of culture medium and it has been possible to develop an algorithm based on the alterations most often associated with embryos which give rise to pregnancy. Prospective studies are now underway.

A presentation based on this work was awarded the best scientific paper (ESHRE Exchange Lecture) at the Fertility Society of Australia Annual Meeting in 2008.

II – Improved cryopreservation of human embryos

Jerustin Karani, David Edgar

Cryopreservation of human cleavage stage embryos has been a routine component of clinical IVF for over two decades but, although the majority of frozen embryos will survive when thawed, a proportion will be lost and others may suffer partial damage. Despite this, the methodology has remained essentially unchanged. We have previously shown that increasing prefreeze dehydration of embryos which have been biopsied for preimplantation genetic diagnosis can enhance the ability to survive cryopreservation in this subgroup of highly cryosensitive cleavage stage embryos. Our studies have now been extended to non biopsied embryos and highly significant improvements in cryosurvival have been obtained with up to 95% of embryos now able to be transferred after thawing.

III – Human oocyte cryopreservation

Debra Gook, Kelly Riordan, David Edgar

Clinical application of oocyte cryopreservation has a number of important potential roles in assisted reproduction, notably in fertility preservation for young women undergoing cytotoxic therapies. Extensive validation work by our group had previously established the safety of egg freezing using slow cooling methods. More recently, improved dehydration conditions for slow cooling have been elucidated and a number of pregnancies have been obtained from oocytes cryopreserved under these conditions. An ultra rapid alternative to slow cooling, vitrification, has also shown promise in this area and we are currently validating the potential and safety of this approach using a number of biological endpoints.

IV – Transplantation of cryopreserved human ovarian cortex

Debra Gook, Judy Borg, Kelly Riordan, David Edgar

For some young women, the only possibility of preserving their fertility, prior to urgently required cytotoxic therapy, is ovarian tissue harvesting and cryostorage. Our group has been closely involved with the development of this technology and, following xenografting studies which demonstrated the retention of follicular developmental competence in human cryopreserved ovarian cortex, we have now progressed to autotransplantation of tissue in selected clinical cases. While

resumption of cycling has occurred in women receiving grafts of thawed tissue, there remain doubts about the efficiency of the approach. Evidence suggests that the problem does not lie with cryosurvival of follicles but is associated with rapid loss of primordial follicles immediately post grafting before neovascularisation occurs. Using the same xenografting model which has been used to validate the original technology, we are now examining possible pathways to protect the grafted tissue during this critical phase.

V – Immunohistochemical markers of human ovarian follicular function

Debra Gook, Judy Borg, Kelly Riordan, David Edgar

Understanding the normal developmental pattern of human ovarian follicles is fundamental to an understanding of female fertility. One important structure in the developing follicle is the zona pellucida (ZP) which acts as a shell surrounding the human oocyte and plays a key role in female gamete function. We have been studying the presence of the glycoproteins ZP1, 2 and 3 which form the human ZP and their pattern of distribution. We have shown for the first time that these proteins are present in follicles at the very earliest primordial stages in human ovaries. We have also demonstrated that excessive deposition of ZP proteins occurs in a proportion of follicles and appears to be associated with follicular atresia.

ANDROLOGY RESEARCH

The male gametes: spermatozoa are the focus of much of the research performed by our Andrology experts. The aim is to develop better methods of assessing sperm function. This should improve the management of male infertility by allowing more accurate assignment of patients to standard in vitro fertilisation (IVF) or intracytoplasmic sperm injection (ICSI).

We also collaborate with others expert in epidemiology and sociology at the Murdoch Children's Research Institute and the University of Melbourne's Key Centre for Women's Health and Monash University and Monash IVF to study the effects of treatment of infertility on the offspring and women.

Sentinel Surveillance on Semen Quality and Time to Pregnancy

Tanya Stewart and Gordon Baker

This project was devised by the World Health Organisation in response to concerns in the 1990s that human sperm counts and fertility were declining. Women pregnant between 16 and 32 weeks were recruited to complete a questionnaire about the time taken to conceive and the factors affecting pregnancy rate. Those whose partners and their mothers had been born in Australia were asked to approach the partner about undergoing physical examination, hormone testing and semen analysis. This study provided reassurance that semen quality does not seem to be low in Australia; in fact fertile women may be conceiving more quickly than reported in the past. Many factors expected to affect pregnancy rates such as previous contraception and smoking were confirmed. Recruitment bias in the semen analysis study was less than expected but other problems with the study design were revealed, particularly the problem of dealing with unplanned pregnancies and confounding; for example if the unplanned pregnancies are included as pregnant at time zero, smoking is associated with a higher pregnancy rate, but if unplanned pregnancies are excluded the expected negative effect of smoking on pregnancy rate is highly significant. The current information about pregnancy rates and the ranges of semen analysis results in fertile couples provides useful reference data. We confirmed that semen quality in these fertile men particularly sperm number per ejaculate was related to body fat as indicated by body mass index (BMI) being lower in underweight and obese men than in normal weight and overweight men. We raised the issue of whether the lower sperm outputs in obese men were cause or effect. Many assume obesity causes the low sperm output but we found evidence of a primary testicular disorder and suggest this may predispose to obesity.

Automated Semen Analysis in the Prediction of Human Fertility

Claire Garrett, De-Yi Liu, Gordon Baker and Gary Clarke

The use of image analysis has long been recognised as having the potential to provide reliable and quantitative evaluation in assessment of semen. Considerable progress has been made with commercial computer assisted semen analysis (CASA) systems for the assessment of sperm

concentration and motion parameters but progress has been much more limited for sperm morphology. We have experience with routine use of the Hamilton Thorn CASA system using IDENT fluorescent stain for assessment of concentration, progressive motility and straight line velocity (VSL). For concentrations $>2 \times 10^6/\text{mL}$ the quality control is good. For sperm morphometry we have used an in-house developed CASA system and in a major study we have found that, together with female age and VSL, our morphometric assessment %Z is related to natural pregnancies rates in 1191 subfertile couples. %Z is derived from morphometric features preferentially selected in sperm in the sperm-zona binding process.

A Randomised Controlled Trial of Intrauterine Insemination (IUI) and In Vitro Fertilisation (IVF) for Idiopathic and Mild Male Infertility

Hossam Elzeiny, Gordon Baker, De-Yi Liu and John McBain

This research compares the outcomes of IVF and IUI in an effort to focus on the relative success rates of the actual techniques. This trial has been completed. Couples with strictly defined idiopathic or mild male infertility were randomly assigned to treatment with IUI or IVF after FSH treatment which produced two or three ovulatory follicles. The pregnancy rate with IVF was significantly higher than for IUI and the contention that IUI is more cost effective than IVF is not supported. Patients who had fewer than two follicles or more than three follicles were not randomised, but treated by IUI and IVF respectively. This result should influence clinical practice and suggests there are abnormalities of gamete transport in patients with idiopathic infertility.

Causes and Management of Male Infertility

Gordon Baker

This is a long standing project with a number of sections. 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 testis biopsy was developed for diagnosis of defects of spermatogenesis and collection of sperm for ICSI. The role of screening investigations for genetic conditions particularly Yq microdeletions and cystic fibrosis mutations was investigated. We provide samples to the National DNA repository for investigation of genetic causes of male infertility, which has

contributed to work on Yq microdeletions and classification of other candidate genes such as CRISP. Over the last 15 years it has become clear that sperm or elongated spermatids that can be used for ICSI may be found in a proportion of patients with severe testicular disorders such as Klinefelter syndrome and Sertoli cell only syndrome, either in the semen or in testis biopsy specimens. Conditions that may be treatable to increase the chances of natural conception include: gonadotropin deficiency or suppression, sperm autoimmunity, genital tract obstruction and reversible toxin exposures or illness effects and some coital disorders. However ICSI is often a better alternative for conditions such as sperm autoimmunity and genital tract obstruction.

The estimation of prognosis for natural conception is also important in patients with less severe disorders of sperm production or function as they need to plan how long they should try before using treatments such as ICSI. We have also studied the mechanisms of development of acquired sperm defects particularly necrospermia with chronic spinal cord injury and other conditions. 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.

Automated Semen Analysis in the Prediction of Human Fertility

Claire Garrett, De-Yi Liu, Gordon Baker and Gary Clarke

We are currently in collaboration with the University of Melbourne Department of Computer Science and Software Engineering and the Spanish company Microptic SL to incorporate %Z in a commercially available CASA system so that our results can be validated by other clinics. In this collaboration we are also looking at alternative analyses (such as cluster analysis) of the sperm-zona binding morphometry data and its relationship to fertility. No commercially available CASA system currently offers the objectivity of full automation or a physiological based assessment of "good" sperm morphology. We believe that these and other advances in CASA will greatly improve the clinical value of semen analysis.

Analysis of Perinatal Outcomes for Mothers and Singleton Babies after ART

David Healy, Jane Halliday, and Gordon Baker

In this study the health of babies and mothers after assisted reproductive technology (ART) is being examined for singleton pregnancies from IVF, ICSI, frozen-thawed embryo transfer (FET) and gamete intra-fallopian transfer (GIFT). The outcomes will be compared with those from non-ART pregnancies in sub-fertile women and a random selection of control women in Victoria. The main aims are to determine if IVF/ICSI/FET singleton pregnancies have a higher incidence of antepartum haemorrhage, placenta praevia, low birth weight, preterm delivery, birth defects and caesarean section than GIFT or non-ART pregnancies in sub fertile women or control women from the general community. The method used is record linkage of 8126 singleton births from the three IVF centres in Victoria (Monash IVF, Melbourne Assisted Conception Centre and Melbourne IVF) for the years 1991-2003 merged with Perinatal Morbidity Statistics System at the Perinatal Data Collection Unit (PDCU) for all births at and after 20 weeks' gestation occurring in Victoria in the same time period. Birth defects data will be obtained from the Victorian Birth Defects Register (BDR), which is linked to the PDCU data routinely. The BDR collects data on birth defects identified in children up to 15 years of age. We found and reported that the birth outcomes for frozen embryo transfers were better with frozen embryo transfers than with fresh embryo transfers and that some diagnoses such as ovarian endometriomata were associated with poorer outcomes. We speculate that defects in the endometrium at the time of embryo implantation with fresh transfers and endometriosis are responsible for setting pregnancies for increased risks of adverse birth outcomes.

Health of young adults conceived by ART

Jane Fisher, Karin Hammarberg, Gordon Baker and John McBain

A pilot study was conducted to test the feasibility of developing a study to follow up people born as a result of ART. Selected women were contacted who had conceived in the early days of IVF and whose offspring would be adult. Most of the women contacted were enthusiastic. A large study has been designed based on this result and it should be possible to determine if there are any major life or health issues arising from ART conception.

STAFF

Reproductive Biology Research

David Edgar (Scientific Director), Debra Gook (Senior Research Fellow), Janell Archer, Jenny Krapez, Stacey Gwilym (Laboratory Supervisors), Celine Lawler, Helena Jericho, Nicole Merry, Petra Wale, Riddhi Marfatia (Embryologists), Judy Borg (Research Assistant), Angela Nelson (Animal Technician).

Genetic and Molecular Research

Leeanda Wilton (Head of Genetic and Molecular Research), Sharyn Stock-Myer (Scientist-in-Charge, Monogenic Preimplantation Genetic Diagnosis), Pam Matthews, Mirjana Martic, Greta Gillies, Peter Coleman, Andrea Twomey, Paisu Tang, (Preimplantation Genetic Diagnosis Scientist), Kate Pope (Nurse/Genetic Counsellor).

Andrology Research

Gordon Baker (Professor), Gary Clarke (Andrologist), Claire Garrett (Physicist), Harold Bourne (Laboratory Manager), De Yi Liu (Senior Research Fellow), Ming-Li Liu (Research Assistant), Tanya Stewart (PhD Student), Debbie Rushford, Heather Amiconi (Research Nurses), Boon Shih (AMS Student).

Clinical Research

Lyndon Hale (Chairman), John McBain (Medical Director), Kate Stern (Research Director), Rachael Knight (Head of Endocrine and Metabolic), Julie Whitehead, Manuela Toledo, Fleur Catrall (Clinicians), Hossam Elzeiny (Fellow in Reproductive Medicine), Franca Agresta (Clinical Research Manager), Joey Micallef (Clinical Research Coordinator), Lauren Williams (Research Fellow), Harold Bourne (Laboratory Manager), Jo Fenby (Nurse Unit Manager), Andrea Lupton, Christine Sartori, Jenny Marks, Clare Tuffley (Nurses)

Psychosocial Fertility Research

Kay Oke (Senior Counsellor), Kate Bourne (Donor Counsellor), Kate Pope (Preimplantation Genetic Diagnosis Counsellor), Catherine Nave, Hayley Matic, Kim Paleg, Merrilyn Mannerheim, Sarah Phillips (Counsellors).

Psychosocial and Epidemiology Research Committee Members

Kay Oke (Convenor), John McBain, Gordon Baker (Melbourne IVF), Jane Halliday (Public Health Genetics - Murdoch Children's Research Institute), Jane Fisher, Karin Hammarberg (Key Centre for Women's Health in Society), David Amor (Genetic Health Victoria), Fiona Bruinsma (Latrobe University- Mother and Child Health Research), Hayley Matic, Sarah Phillips, Lauren Williams, Franca Agresta (Melbourne IVF)

Reproductive Services and Melbourne IVF research departments have many loyal supporters and strong relationships with our sponsors which they wish to thank and acknowledge.

KEY PARTNERSHIPS

We wish to acknowledge the following partnerships that continue to enhance our skills in specific research areas:

- National DNA repository
- Murdoch Children's Research Institute
- The University of Melbourne's Key Centre for Women's Health
- Molecular Biometrics and Yale University
- The University of Melbourne Department of Computer Science and Software Engineering
- The University of Melbourne Department of Obstetrics and Gynaecology
- Centrum Medische Genetica, Brussels, Belgium
- Microptic, Spain
- Latrobe University – Mother and Child Health Research
- Burnett Institute
- Melbourne Pathology
- Peter MacCallum Cancer Institute
- The Royal Melbourne Hospital
- Consultative Council on Obstetric and Paediatric Mortality and Morbidity, and Perinatal Data Collection Unit

The Freemason's Hospital and the Women's ensure our patient care is of paramount standard and for this we thank them, as our patients provide us with the motivation for ensuring we are abreast with cutting edge research that will enable us to better our practices to service them completely.

PUBLICATIONS

Seventeen refereed papers, plus 24 published abstracts of scientific presentations.

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.

Mental health research

Mental health research is conducted within a population health framework and reflects our interest in and clinical commitment to the social model of health. 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. Whilst much of the mental health research in the hospital is undertaken by the Centre for Women's Mental Health, many areas of the hospital include an interest in mental health issues in the research they undertake.

Our research in 2008 continued to focus on two key areas: pregnancy and transition to motherhood, and the mental health aspects of women's cancer.

Pregnancy related research is undertaken by a range of researchers, with attention to different aspects of the pregnancy experience.

- We studied the circumstances and experiences of women with an unplanned or unwanted pregnancy who contacted the Women's Pregnancy Advisory Service (PAS) contemplating or seeking abortion. Quantitative data were obtained by audit of the electronic records of PAS for a 12 month period; qualitative data were obtained by telephone

interview to gather detailed information about women's experiences. The final report of the project is expected in 2009.

- We continued with the second year of a study investigating which aspects of social support are most associated with postnatal depression. The study is novel as it examines both perceived social support i.e. the sense that support is available if one needs it, and received social support i.e. the support one actually receives. In addition we are exploring the differential effects of support according to who provides it e.g. partner, parent, friend; what kind of support is provided i.e. practical, informational or emotional support; and whether effects differ if support is provided in the antenatal or postnatal period.
- We continued data collection in a study examining factors which may influence whether or not women with established diabetes seek pre-pregnancy care. Diabetes may have a range of adverse effects in pregnancy, for both mother and baby, yet only about a third of women with diabetes seek this care. Data collection is being undertaken by our postgraduate research student at both the Women's and at Monash Medical Centre.

In 2008, we further expanded and consolidated our research in the mental health aspects of women's cancer.

- We continued with the second year of a study examining the nature and extent of long-term quality of life difficulties and supportive care needs of survivors of gynaecological cancer and their partners. This project investigates a variety of indices of quality of life including anxiety, depression, sexual functioning, relationship satisfaction, and body image. This project is novel in its inclusion of these outcomes in partners of gynaecologic cancer survivors and findings will enable comparison of outcomes within couples.
- We commenced a longitudinal, prospective study investigating the prevalence and course of psychological morbidity in women with breast and gynaecologic cancers. The background to this study is the recognition that cancer is associated with high rates of both emotional distress and clinically significant levels of depression and anxiety. Despite these high rates, evidence indicates that clinically signifi-

cant symptoms are often unrecognised by oncology professionals. Screening for anxiety and depression followed by appropriate triage is therefore an important activity in oncology settings. Unfortunately, such screening is rarely implemented in practice due to a shortage of resources. The establishment of the Centre for Women's Mental Health and increased clinical capacity created an ideal opportunity to conduct this investigation. Women with newly diagnosed breast and gynaecologic cancers complete self-report measures of anxiety and depression at 8-weekly intervals beginning at diagnosis. Women scoring above the threshold on self-report are offered referral to mental health services. It is intended that the findings of the study i.e., empirically derived, local data as to the most appropriate time to conduct psychological screening, will be incorporated into routine clinical practice.

- We also commenced an investigation of the occupational wellbeing and mental health of Australian gynaecologic oncologists. The background to this study is the recognition that the work of a gynaecologic oncologist provides opportunity for both great satisfaction and great distress. Previous studies of oncologists have reported high levels of stress, burnout and psychological morbidity, and found that large numbers of oncologists are considering leaving or decreasing their work hours. The potential loss of highly trained and experienced clinicians is concerning in the context of an ageing population and increasing incidence of cancer. The extent to which these issues affect gynaecologic oncologists in Australia is not known. The specific aims of the study are to identify key aspects of the job undertaken by gynaecologic oncologists in Australia, including changes over time; to measure the prevalence of psychological morbidity and occupational burnout, to assess job satisfaction and stress, to describe currently employed and potentially useful stress management/wellness promotion techniques, and to identify potential improvements to future gynaecologic oncology fellowship curricula. All practicing members of the Australian Society of Gynaecologic Oncologists who reside in Australia are being invited to participate.

PUBLICATIONS

Six publications in academic journals

RESEARCH FUNDING

Our research has been supported by the Pratt Foundation, the Collier Charitable Fund, Australian Research Council Linkage Grant, Western and Central Integrated Cancer Service (WCMICS)

COLLABORATIONS

Prof Henry Jackson, Dr Gary Robbins, School of Psychology, University of Melbourne; Dr Alison Nankervis, Royal Women's Hospital; Dr Heather Rowe, Key Centre for Women's Health in Society University of Melbourne

A/Prof Alex Cockram, University of Melbourne; Prof Michael Quinn, RWH; Prof Bruce Mann, RMH/RWH Breast Service

Women's Cancer Research Centre

The Women's has a long history of research on women's cancers, particularly gynaecological oncology and more recently breast and ovarian cancer. Research in the Women's Cancer Research Centre (WCRC) is focused on ovarian cancer, involving clinical translational research and laboratory research. The Centre also trains post-graduate students from other Universities in cancer biology. The close interface between the clinic and laboratory facilitates access to cancer tissues for research, as well as the opportunity to translate research findings into clinical practice for the benefit of patients.

OVARIAN CANCER RESEARCH

Every 11 hours one woman dies of ovarian cancer in Australia. One in 67 women will be diagnosed with ovarian cancer in her life time. If the cancer is detected when still confined to ovaries, the five year survival rates are 90%. But if the diagnosis is late when the cancer has spread within the peritoneum the five year survival is reduced to 30%.

A major goal of our laboratory research is to discover ways that will stop the spread and recurrence of ovarian cancer. Unfortunately, 70% of the women diagnosed with ovarian cancer are already in advanced stages of the disease when the tumour has metastasized into the peritoneal cavity. When this happens, there is an accumula-

tion of peritoneal tumour fluid (ascites) in the peritoneal cavity, containing aggregates of tumour cells. The team, led by Dr Nuzhat Ahmed, has shown that ovarian tumour spheroids are capable of growing very slowly and are extremely invasive, suggesting that they are a potential mode of ovarian cancer spread. Most patients diagnosed with advanced-stage ovarian cancer respond favourably to debulking and surgery, followed by six cycles of chemotherapy, but recurrence is common within few months. The slow cycling cells within the spheroids are resistant to therapies that target proliferating cells and thus are a key to recurrence of chemoresistant cancer. Moreover, there is a growing consensus that ovarian cancer like many other solid tumours (and leukaemias), is a stem cell disease where a small population of cells within the tumour or spheroids have acquired the ability to self renew and reproduce characteristics of the primary tumour both in vitro and in vivo. This warrants the need to study in detail the biology of ovarian tumours, ascites spheroids and distant metastases and to evaluate the existence of 'cancer initiating stem cells', as identification of molecules expressed in these cells could serve as targets for the prevention of cancer dissemination and recurrence. We are pursuing these two lines of investigations. In a complementary approach, we are using gene expression array analysis to compare the genomic profile of (a) primary tumours, (b) ascitic spheroids, and (c) macroscopic solid metastases obtained from the same advanced-stage ovarian cancer patients. These tumours are treated with chemotherapeutic drugs and profile of genes before and after treatment is being evaluated in a bid to identify genes not only unique to different stages of progression of ovarian cancer but also those responsible for facilitating chemoresistance.

CLINICAL ONCOLOGY RESEARCH

In 2009, there was a large increase in our clinical trial portfolio with more than 50 patients being included in national and international studies, and we are most grateful to the Women's Cancer Foundation for ongoing support for our clinical research nurses.

Negotiations are underway with Clinical Trials Australia, which is an amalgam of hospitals involved in developmental trials within Victoria, to allow access for our patients with advanced malignancy to be entered into Phase 1 studies.

Current studies are as follows:

1. The Lace Trial – This is a study comparing total laparoscopic hysterectomy compared with standard total abdominal hysterectomy in women with Stage 1 endometrial cancer. The principal investigator is Dr Deborah Neesham and accrual is above target.
2. Tripod – Tripod is a phase 2 study of the use of intra-peritoneal therapy in high risk ovarian cancer and only 2 patients were included in this trial which has now closed for analysis.
3. ICON 7 – This is a trial using adjuvant Bevacizumab 3 weekly in combination with Carboplatin and Taxol in advanced ovarian cancer. Thirteen patients were accrued – right on target – and follow up is in progress.
4. AZD2281 In platinum-sensitive ovarian cancer – This is a study of an oral PARP inhibitor as maintenance therapy after 2nd or 3rd line response to Cysplatin. Five patients were accrued into this study in which the leader investigator is Dr Claire Scott from the Royal Melbourne Hospital.
5. MORAB – This is a study targeting the folate receptor in ovarian cancer and involves patients with platinum resistant refractory disease. Three patients have been entered and the study is ongoing.
6. AMG386 – This is dose escalation study of AMG386 in 2nd or 3rd line platinum refractory/resistant disease. It is still underway after modification and three patients have been entered into this trial.
7. IRS – The IRS is an immune study in which optimal administration of low dose oral Cyclophosphamide being administered for 3rd line recurrent ovarian malignancy. Seven patients have been entered into the trial so far.
8. OVER 16 – This is a Phase 3 trial in advanced ovarian malignancy, being run by the Gynaecological Cancer Intergroup , involving the use of Pazopanib monotherapy following 3rd line chemotherapy in ovarian carcinoma. Four patients have been entered with the study due to close in July 2010.

Four studies are on follow up – GOG182 , Calypso, SCROROC 4 and Tarceva with over 35 patients continually being assessed following cessation of treatment. Apart from our clinical trials, a number of other studies were performed during 2009 and

Dr Tom Cade was the lead author on a paper on the use of progestogen therapy as non-surgical treatment for the management of patients with endometrial cancer. Dr Sumi Ananda is working on her MD which includes studies on survival of patients in clinical trials and the use of CA-125 in a follow up /management of patients with ovarian malignancy.

Dr Jeffrey Tan continues with our team to publish extensively on the management of patients with precancerous changes of the cervix and a large study has just been completed into the role of HPV testing as a “test of cure” and for all women treated for cervical dysplasia.

The oncology/dysplasia unit meets monthly to cover our own ongoing research commitments and we are grateful Anne Hearn, our secretary, for keeping the minutes and providing agendas.

Neonatal paediatrics

Our research goal in neonatal paediatrics is to improve the health of all newborn infants, not only in the short-term, but also in the long-term. To do this we need to understand what problems occur in the newborn period, and to seek ways to ameliorate these problems. We recognise that research questions need to be both important and answerable. Moreover, we also recognise that many questions need large numbers of subjects, and hence we need help from lots of collaborators to solve some of the bigger problems confronted by newborn babies.

NEONATAL RESPIRATORY RESEARCH

The neonatal respiratory research group has studied the term and preterm infant immediately after birth in the delivery room. During this period of normal transition (from a fetus dependent on a placental circulation to a newly born infant), complex changes occur in the infant's circulation whilst at the same time the lung starts to fill with air. We undertook a series of animal and human studies during this critical period, to learn more about the factors that cause lung injury during transition with the purpose of minimizing lung injury and finding ways to optimise the long term respiratory health and well-being of premature babies.

The respiratory group investigated the following areas in 2008:

- 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.
- A large randomised trial comparing two different ways of passing a breathing tube into a newborn infant's larynx to provide mechanical ventilatory support. This trial began in 2006 and continued to recruit infants.
- 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 eventually enrolled 600 babies worldwide, and has led to a gentler form of assistance with breathing that will reduce lung injury in these very immature babies. The results of this study were published in 2008 in The New England Journal of Medicine.
 - 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 studies our group has been involved with include investigations focussing on different techniques to help babies to breathe, including how best to provide respiratory support in the delivery room, observing spontaneous breathing patterns of newly born infants, evaluating new technologies in the delivery room setting, identifying the optimal time to discontinue mechanical ventilation of very low birth weight infants and studying the different modes of non invasive ventilation in the nursery.
- Animal studies in sheep, including in the uterus, of the effects of breathing techniques on lung injury and circulation of blood immediately after birth – these studies involve our collaborators in the Department of Physiology at Monash University.

NEONATAL NEUROLOGY RESEARCH

The brain research group investigated the following areas in 2008:

- How specialised magnetic resonance imaging of the brain of very tiny or preterm babies can be used to predict 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.

LONG-TERM FOLLOW-UP RESEARCH

The Premature Infant Follow-up Programme investigated the following areas in 2008:

- Continued to evaluate a cohort of 2-year old children who were born in 2005 in the state of Victoria with either birth weights <1000 g or gestational ages <28 weeks. Their outcomes will be compared with similar cohorts born in the state in the late 1970s, middle 1980s, early 1990, and 1997.
- Participated in evaluating the outcomes for many perinatal and neonatal randomised controlled trials.

MOLECULAR GENETICS RESEARCH

Molecular genetics research relevant to neonatology has continued in two specific ways:

Firstly, the collaboration with the Hall Institute has continued. We have generated and studied the first mouse model for Harlequin Ichthyosis and have shown that the gene responsible for the rare but very serious neonatal skin condition (Abca12) may have roles in lipid homeostasis beyond the skin. This has important implications for the pathogenesis of atherosclerosis and is a source of on going

study. These findings have been published in PLoS Genetics and will be presented at international conferences in Boston and Edinburgh (International Symposium on Atherosclerosis, Boston, 2009; 16th International Society of Developmental Biology Edinburgh, 2009). In addition to these projects we have applied genetic and epigenetic methods to explore inflammation induced embryonic lethality associated with mutations in *Aip1/Wdr1*, which regulates the actin-cytoskeleton. We have preliminary data to show this lethal inflammation in *Wdr1* mutated mice is caused by infections acting through the Toll-like receptor pathway via the inflammasome.

Secondly, we have initiated a new collaboration with the Developmental Epigenetics Laboratory Murdoch Children's Research Institute that seeks to examine the genetic and epigenetic factors that are associated with both the causes and consequences of prematurity. We propose to combine the expertise of the Epigenetic Group of the MCRI and RCH, which has an internationally competitive expertise in genetic and epigenetic research with the Victorian Infant Collaborative Study group (VICS) group, which is the country's leading epidemiological group looking at the outcomes of prematurity. Central to this proposal is the development of both retrospective and prospective DNA and cell biorepositories (primary human umbilical endothelial cells, buccal cells, lymphocytes and EBV immortalised lymphocytes and placental tissue) from premature infants and term controls. We will not only be able to look at associations between genetic variability and prematurity but will also, through the cells collected, be able to demonstrate the tissue-specific mechanism by which this occurs.

We have worked to highlight the importance of genetic, epigenetic and translational research to a wider neonatal audience by taking up invited speaker invitations at international meetings such as the Neonatal Update Course run by Imperial College. London.

RESEARCH FUNDING

To support our research, we have a large grant from the national Institutes of Health in the USA, a large program grant, six project grants, and one enabling grant 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 three articles in peer-reviewed international journals, including the highest impact factor journals such as the New England Journal of Medicine and Nature Immunology, as well as high impact factor specialty journals, such as Brain and Pediatrics.

POSTGRADUATE STUDENTS

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

THESES PASSED

Dr Alicia Spittle. PhD. University of Melbourne. The Effects of a Randomised Controlled Trial of a Preventative Care Program at Home on Motor Outcome for Preterm Infants Over the First year of Life. Supervisors Prof Lex Doyle, A/Prof Ros Boyd, A/Prof Terrie Inder.

ADVANCED MEDICAL SCIENCE STUDENTS

Kate Robertson, Alicia Jones, Benjamin Shum, Charmaine Yam.

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; Professor Doug Hilton and Dr Ben Kile, Molecular Medicine Division of the Walter and Eliza Hall Research Institute; 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, Dr Susan Donath and Dr Kate Lee, 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, A/Prof Terrie Inder and Prof 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 Georg Schmoelzer, Dr Arjan Te Pas, Dr Kevin Wheeler, Connie Wong.

Brain Research

Dr Peter Anderson, Dr Nisha Brown, Ms Kate Callanan, Cinzia de Luca, Dr Noni Davis, Prof Lex Doyle, Dr Sue Jacobs, Elaine Kelly, Dr Gehan Roberts, Dr Sheryle Rogerson, Dr Alicia Spittle.

Premature Infant Follow-up Programme

Dr Peter Anderson, Ms Kate Callanan, Dr Noni Davis, Cinzia de Luca, Prof Lex Doyle, Dr Julianne Duff, Esther Hutchinson, E Kelly, Marion Macdonald, Dr Gehan Roberts.

Molecular and Population Genetics

Dr Doug Hacking

Pharmacy research

Conducting and participation in clinical research is the responsibility of healthcare clinicians in our quest to provide quality and evidence based practices. The pharmacy staff are keen and will support research, especially those involving the use of medicines. Our primary goal is to promote a safe and quality use of medicines for our patients.

Our roles in clinical research are varied and include, but are not limited to, the following:

- managing the clinical study materials
- allocation of study packs
- preparing the randomization for the investigators
- monitoring and reporting adverse events to investigators
- collecting data and presenting reports based on pharmacists' interventions

In 2008, the pharmacy continued to contribute in the following research projects:

- TAP Block study – Ultrasound guided Transversus Abdominis Plane Block in major gynaecological surgery.

- ASTEROID trial - Australasian Antenatal Study To Evaluate the Role Of Intramuscular Dexamethasone versus betamethasone prior to preterm birth to increase survival free of childhood neurosensory disability
- Randomised, double blind placebo-controlled study of the efficacy and safety of MORAb-003 in combination with paclitaxel therapy in subjects with first platinum-resistant or refractory relapsed ovarian cancer
- Proprems Study (use of PRObiotics to reduce the incidence of sepsis in PREMature infants)
- OVATURE study (OVarian TUmour REsponse)
- CALYPSO (CAeLYx® in Platinum Sensitive Ovarian patients)
- TARCEVA –randomized multicentre phase III study of erlotinib in gynaecological cancers
- ICON7 –randomised multicentre trial of adding bevacizumab to standard chemotherapy in ovarian cancer
- TRIPOD (TRial of IntraPeritoneal chemotherapy in Ovarian Disease)
- PROGRESS (PROGesterone after previous preterm birth for preventing neonatal RESpiratory distress Syndrome)
- TIPPS study (Thrombophilia In Pregnancy Prophylaxis Study)
- 5-HT3 Antagonists: Change in Post Chemotherapy Antiemetic Regimen and the Effect on the Patient's Level of Nausea and Constipation
- Survey of general practitioners – use of medicines in breastfeeding women
- Management of gestational trophoblastic disease – an audit
- Medicines Used By Mothers Of Newborn Infants
- Drug usage reviews on solifenacin, surfactants use in neonatal unit.

Outputs: the findings are presented locally in the clinical newsletter and at the annual conference organized by the Society of Hospital Pharmacists of Australia (SHPA) and at Clinical Oncology Society of Australia (COSA).

Researching pregnancy, birth and beyond

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 (see separate report)
- 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 research 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.

RESEARCHING MATERNITY SERVICE PROVISION, WOMEN'S VIEWS AND BREASTFEEDING

The Women's has a program of research exploring how we provide care for women attending here for pregnancy care. This includes implementing and evaluating new models of care; conducting surveys and focus groups with women and engaging with staff about their views and ideas. We also have a focus on building research capacity among midwives, nurses and allied health clinicians. We aim to ensure that how we provide care for women and babies is done in the best way, using up-to-date evidence and to improve outcomes where we can. For example we aim to increase the percentage of women who initiate and continue breastfeeding, and we want to explore the best way to provide support for women during pregnancy, birth and the early postnatal period.

Caseload midwifery trial

Investigators: 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').

Funding: NHMRC Project Grant.

Collaborations: Royal Women's Hospital, La Trobe University.

Status: 2008 – recruiting women to the study and collecting data. We will recruit about 2,000 women to the trial in total.

Exploring an alternative approach to early postnatal care

Investigators: Della Forster, Helen McLachlan, Jane Yelland, Joanne Rayner, Lisa Gold, Tanya Farrell, Tracey Savage

Demand for postnatal beds is high, and 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: 2008 – intervention, data collection and analysis.

Breastfeeding Projects

A number of projects related to breastfeeding are commencing and being planned. We are 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 also collaborated 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; Philanthropic funding.

PUBLICATIONS

Eleven articles in peer-reviewed international journals

Pregnancy Research Centre

The blueprint for a healthy life is largely determined by events which take place in the uterus before we are even born. The relationship between a mother and her baby is quite literally therefore a partnership for life.

The focus of the Pregnancy Research Centre is to better understand the causes of 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 of the size of the Royal Women's Hospital which cares for more than 6,000 pregnant women each year.

Many of these women have pregnancies troubled by complications such as miscarriage, pre-eclampsia, fetal growth restriction, gestational diabetes and preterm labour.

These common pregnancy complications create significant medical, emotional, social and economic costs within our community. Any decline in the incidence or severity of these pregnancy complications significantly reduces these costs.

The principal beneficiaries of the outcomes 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".

LABORATORY PROJECTS

- Professor Shaun Brennecke and Dr Christine East 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 Bill Kalionis, Dr Rishika Pace, 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, funded by an NHMRC project grant.
- 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 Paediatrics, studied 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 Niro Pathirage, 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, funded by an NHMRC project grant.
- 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.

- Dr Maria Kokkinos has been investigating specific genes important in the transition of cells from a resting (epithelial) to a mesenchymal phenotype referred to as the epithelial-to-mesenchymal transition (EMT). These studies may assist to establish a clearer understanding of the way the placenta develops
- Dr Rosemary Keogh is developing research in the field of cardiovascular reproductive biology, investigating uterine spiral arteriole remodelling in early human pregnancy. This work will help to identify defects in this process which could form the basis of improved pre-eclampsia diagnostic and treatment strategies.

CLINICAL PROJECTS

- Dr Joanne Said was invited to conduct the Thrombophilia in Pregnancy Prophylaxis Study (TIPPS) at the Royal Women's Hospital. 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 Ricardo Palma-Dias is the Head of the RWH Fetal Management Unit. His research interests are the perinatal outcomes of major fetal anomalies and the emerging role of fetal magnetic resonance imaging in the assessment of fetal anomalies. He is also interested in using Doppler ultrasound as a tool for identifying fetal well-being in high risk pregnancies.
- Dr Christine East is developing a way of recording babies' movements using an ambulatory fetal activity monitor while the pregnant woman continues with her normal activities. This will measure the activity of the unborn baby during pregnancy, looking at the number of times s/he moves and how simple or complex the movements are. It is expected that the unborn baby who is not getting enough nutrition during the pregnancy will have fewer

movements than other unborn babies. This project is funded with grants from NHMRC and SIDS and Kids.

- Dr Penelope Sheehan was invited to be site investigator for the Early External Cephalic Version 2 trial. This multicentre, international, randomized controlled trial co-ordinated by the Centre for Mother, Infant and Child Research in Toronto was designed to investigate the question of the timing of an external cephalic version, in particular whether early ECV improves success rates without incurring significant risks of worse outcomes from preterm delivery.
- Dr Penelope Sheehan undertook a study of maternal satisfaction and psychiatric illness in 350 women followed for 6 months postpartum, funded by a grant from the Keith Fitzmaurice Bursary.

RESEARCH FUNDING

Research funding has been provided from many different sources, including the Royal Women's Hospital; the Royal Women's Hospital Foundation; the University of Melbourne; Australian National Health and Medical Research Council; the National Institutes of Health (NICHD), USA; RANZCOG Research Foundation; Harold and Cora Brennen Benevolent Trust Grant (Equity Trustees); Keith Fitzmaurice Bursary; The Wenkart Foundation; Perpetual Trustees; Eirene Lucas Foundation, SIDS & Kids; DHS/Victorian Quality Council.

PUBLICATIONS

Sixteen articles in highly-ranked, peer-reviewed international journals, including American Journal of Obstetrics and Gynaecology, Australian and New Zealand Journal of Obstetrics and Gynaecology, Birth, British Journal of Clinical Pharmacology, Developmental Biology, Fetal Diagnosis and Therapy, Molecular Human Reproduction, Pediatric Health, Placenta, Reproduction, Fertility and Development

PHD THESES PASSED

Dr Joanne Said

"Inherited Thrombophilia and Pregnancy Outcome"

Supervisors: Prof Shaun Brennecke, Prof John Higgins

AWARDS

Gayathri Rajaraman

Australia and New Zealand Placental Research Association Young Investigator Award, for 2nd Prize for best oral presentation and a YW Loke New Investigator Travel award, IFPA 2008, 10-13 September, 2008, Graz, Austria

Finalist, Victorian Premier's award, June 2008

Recipient of a Royal Women's Hospital Travel Grant

SRB New Investigator Finalist, ESA/SRB Combined Conference, Melbourne Australia 25th-28th August 2008

Amy Chui

Best Oral Presentation, ESA-SRB Annual Meeting 2008, 25-28 August 2008, Melbourne, Australia

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 (e.g. the use of fetal fibronectin testing and the use of tocolytic therapy), pre-eclampsia management (e.g. the role of low-dose aspirin therapy) and the care of pregnant women with thrombophilia disorders.

PREGNANCY RESEARCH CENTRE STAFF

Prof Shaun Brennecke, Anthony Borg, Jo Bruhn, Dr Christine East, Dr Elizabeth Fitzpatrick, May Grgurinovic, Dr Neil Gude, Dr Bill Kalonis, Dr Rosemary Keogh, Dr Maria Kokkinos, Assoc Prof James King, Dr Padma Murthi, Dr Rishika Pace, Dr Ricardo Palma-Dias, Penny Ashley, Dr Niroshani Pathirage, Dr Gayathri Rajaraman, Sue Duggan, Sue Nisbet, Dr Joanne Said, Dr Penny Sheehan, Janet Stevenson

VISITING RESEARCHERS

Dr Eric Moses, Southwest Foundation for Biomedical Research, San Antonio, Texas, USA

Dr David Elad, Dept of Biomedical Engineering, Tel Aviv University, Israel.

Ms Wendy Pollock, School of Nursing and Social Work, The University of Melbourne.

POSTGRADUATE STUDENTS

Amy Chui, Kimberley Crawford, Natalie Castrechini, Cameron Nowell, Sharon Qin, Gayathri Rajaraman, Penelope Sheehan, Joanne Said, Nicola Bryan.

ADVANCED MEDICAL SCIENCE STUDENTS

Pamela Anjara, Rafitasari Atmadilla, Melissa Chong, Fazlin Faisal, Zina Hijazi, Nurul Larasati, Vanisri Muniyandi, Lahini Samarawickrama, Charmaine Tay, Clara Yip

SUMMER SCHOLARSHIP STUDENTS

Emma Boehm, Lynsey Marshall, Melissa Duggan

COLLABORATIONS

International

Prof Rigmor Austgulen, Faculty of Medicine, Institute of Cancer Research & Molecular Biology, Norwegian University of Science & Technology, Trondheim, Norway; Assoc Prof Michael Bates, Cincinnati Ohio, USA, Dr John Blangero, Dr Harald Göring, Dr Eric Moses and Dr Katy Freed, Southwest Foundation for Biomedical Research, San Antonio, Texas, U.S.A.; Dr Judith Cartwright and Dr Guy Whitley, St George's Hospital University of London, UK; Ms Julichristie Machado de Oliveira, School of Public Health, University of Sao Paulo, Brazil; Professor Gernot Desoye, Clinic of Obstetrics and Gynaecology, University of Graz, Graz, Austria; Dr Jan Jaap Erwich and Dr MA Huisman, Department of Obstetrics & Gynaecology, University Hospital Groningen, Groningen, the Netherlands; Dr Ursula Hiden, Department of Obstetrics and Gynecology, Medical University, Graz, Austria; Prof John Higgins, Department of Obstetrics & Gynaecology, University College, Cork, Ireland; Assoc Prof Eileen Hutton, The Centre for Mother, Infant, and Child Research, Sunnybrook Research Institute, University of Toronto, Canada; Dr Jeff Keelan, Liggins Institute, Auckland, New Zealand; Dr Hai-ying Liu, Department of Obstetrics and Gynaecology, Shandong University, China; Dr Martin Knofler, Medical University of Vienna, Vienna, Austria; Dr Paul Marchant, School of Information Management, Leeds, Metropolitan University, Leeds, UK; Prof Kypros Nicolaides, Fetal Medicine Foundation, London, UK; Dr Marc Rodgers, Ottawa Hospital, Canada; Ms Rebecca Smyth, University Department of Obstetrics and Gynaecology, Leeds Metropolitan University, Leeds, UK; Dr Kelvin Tan, Department of Maternal Fetal Medicine, KK Women's and Children's Hospital, Singapore; Dr A Timmer, Department of Pathology, University Hospital Groningen, Groningen, The Netherlands; Prof Borghild Roald, Faculty of Medicine, University of Oslo, Oslo, Norway

National

Victoria – Dr Lisa Begg and Dr Steve Cole, Maternity Service, Royal Women’s Hospital; Dr Janine Campbell, Department of Haematology, Royal Children’s Hospital; Dr Jeanie Cheong, Neonatal Service, Royal Women’s Hospital; Prof Suzanne Crowe, Centre for Virology, Macfarlane Burnet Institute for Medical Research and Public Health; Dr Susan Donath, Clinical Epidemiology, Murdoch Children’s Research Institute, Royal Children’s Hospital; Dr Karen Dwyer, Dr Jennifer McRae, Dr Yanqui Li, Ms Elizabeth Kennedy, Immunology Research Centre, St Vincent’s Hospital; Dr Kate Elliott, Autogen Pty Ltd; Dr Susan Forrest, Australian Genome Research Facility; Dr Michelle Fink, Paediatric Radiology, Royal Children’s Hospital; Dr Della Forster, Royal Women’s Hospital, Melbourne / LaTrobe University; Dr Vera Ignjatovic, Department of Paediatrics University of Melbourne & Murdoch Children’s Research Institute, Royal Children’s Hospital; Professor Fiona Judd, Mental Health, Royal Women’s Hospital; Dr Ursula Manuepillai, Monash Institute of Medical Research; Professor Susan McDonald, Professor of Midwifery, La Trobe University/ Mercy Hospital for Women Midwifery Professorial Unit, Mercy Hospital for Women; Prof Paul Monagle, Department of Paediatrics, University of Melbourne; Prof Roger Nation and Dr Craig Rayner, Department of Pharmacy Practice, Victorian College of Pharmacy, Monash University; Dr Don Newgreen, Murdoch Children’s Research Institute, Royal Children’s Hospital; Assoc Prof Helena Parkington and Dr Marianne Tare, Department of Physiology, Monash University; Dr Anthony Purcell, Department of Biochemistry and Molecular Biology, University of Melbourne; Dr Stephen Rogerson, Department of Medicine, University of Melbourne

Queensland – Prof Paul Colditz, Perinatal Research Centre, Royal Women’s Hospital; Prof Stuart Crozier and Assoc Prof Stephen Wilson, Biomedical Engineering, The University of Qld; Assoc Prof Tony Perkins and Dr Jessica Vanderlelie, School of Health Science, Griffith University, Southport.

South Australia – Prof Caroline Crowther, Maternal Perinatal Clinical Trials Unit, Discipline of Obstetrics and Gynaecology, The University of Adelaide, Women’s and Children’s Hospital; Assoc Prof Stan Gronthos, Institute of Medical and Veterinary Science/Hanson Institute; Assoc Prof Andrew Zannettino, Myeloma and Mesenchymal Research Group, Hanson Institute

New South Wales – Ms Naomi Henshall, Royal Hospital for Women; Dr Leo Leader, Department of Obstetrics and Gynaecology, The University of New South Wales, Royal Hospital for Women, Sydney; Prof Roger Smith, Professor of Endocrinology Faculty of Medicine, The University of Newcastle

Western Australia – Prof David Smith, Engineering Computational Biology Group, School of Computer Science and Software Engineering, The University of Western Australia

RESSEARCHE

FUNDING

2008

Funding from government sources

NATIONAL INSTITUTES OF HEALTH USA

Inder T (PI), Anderson P (PI), Neil J (CI), Van Essen D (CI), Doyle L (CI). Neurobehavioural impairments in preterm children – A longitudinal MR Study. \$1,774,647

Moses E, Blangero J, Brennecke S. Identification of pre-eclampsia susceptibility genes. \$3,700,000

NATIONAL HEALTH AND MEDICAL RESEARCH COUNCIL OF AUSTRALIA

Program Grant

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

Project Grants

Aitken RJ, Baker HWG. Molecular basis of defective sperm function. \$232,500

Amir L. CASTLE (Candida and Staph Transmission: Longitudinal Evaluation) Study \$751,600

Anderson P, Inder T, Doyle L, Hunt R, Neil J, Cheong J. Determining the mechanisms leading to long-term impairment in very preterm children: The ViBeS Longitudinal Study

Colditz P, Brennecke SP, East C, Sullivan C, Crozier S, Wilson S. Ambulatory fetal activity monitoring predicts clinical outcome. \$381,875

Crowther C, Doyle LW, Anderson PD, Haslam R, Robinson J, Harding J. Early school age outcomes after exposure to repeat prenatal corticosteroids. \$1,023,590

Doyle LW, Anderson PJ. Evaluating neonatal intensive care for tiny babies in the 2000s – is it still effective, efficient and available? \$239,226

Doyle L, Anderson P, Wood S, Robertson C, Hope S, Hacking D, Cheong J. Determinants of Health in Adolescence of Low Birth Weight or Extreme Prematurity. \$ 1,362,138

Flenady V, King J. The Epidemiology of Unexplained Fetal Death in Australia. \$442,476

Garland S, Condon J, Rumbold A, Stankovitch J, Brown N. An epidemic of vulvar cancer in young women; investigating the role of human papillomavirus and genetic susceptibility. \$476,625

Garland SM, Fairley CK, Bradshaw S, Pirotta M. Treatment and prevention of bacteria vaginosis: a randomised controlled trial. \$255,425

Garland SM, Gertig G, Wark J, Tabrizi S, Pitts M, Erbas B. Genetic and environmental factors in invasive cervical cancer: a twin study. \$737,763

Garland SM, Tabrizi SN, Fairley CK, Donovan BJ. Surveillance of LGV Chlamydia trachomatis types among men who have sex with men (MSM). \$186,875

Garland SM, Tobin J, Pirotta M, Jacobs S, Chatham E, Tabrizi SN, Morley C. The use of Probiotics to reduce the incidence of sepsis and necrotising enterocolitis (NEC) in premature infants. \$773,625

Giles G, Severi G, Hopper J, Garland SM, Pedersen J, Geczy C, Southey M. Infections, inflammatory markers and prostate cancer risk. \$706,813

Nicos N et al (Hacking D, Associate investigator). Mouse genetics to identify molecular regulators of blood cell formation and regulation of cytokine singular transduction. \$17,272,992

Hocking JS, Bradshaw CS, Tabrizi S, Fairley CK, Pirotta M, Donovan B. A longitudinal study of bacterial vaginosis and Mycoplasma genitalium in young Australian women. \$115,000

Kalionis B, Gude NM, Brennecke SP. Characterisation of abnormal placental stem cells in a human pregnancy disorder. \$468,300

Liu DY, Baker HWG. Male infertility and defective spermocyte interaction. \$239,700

Makrides M, Gibson R, Doyle L, Anderson P, Ryan P, Collins C. Long-term follow-up of children born preterm who received high dose DHA: the DINO trial follow-up. \$681,300

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

Murthi P. Role of placental transcription factors in fetal growth restriction. \$567,000

Quinn MA, Mileskin L, Khaw K, Creuzberg K, Friedlander M, Gainford M. Chemoradiation and adjuvant chemotherapy versus radiation alone in high risk and advanced endometrial cancer. \$446,625

Tarnow-Mordi WT, Morley C, Doyle LW, Davis P, Cole C. Which oxygen saturation level should we use for very premature infants? A randomised controlled trial. \$2,220,000

Enabling Grant

Crowther C, Doyle LW, Flenady V, Roberts C, Lumley J. Interdisciplinary maternal perinatal action on clinical trials (IMPACT) Collaboration. \$1,000,000

Personal Support

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

Other government grants

DEPARTMENT OF HEALTH AND AGING

Victorian Centre of Excellence in Depression and Related Disorders

NEW SOUTH WALES HEALTH DEPARTMENT

Donovan B, Harcourt C, Egger S, Fairley CK, Chen MY, Kaldor JM, Marshall L, O'Connor J, and Tabrizi S. Status report on the female sex industry in New South Wales. \$81,081

WEST AUSTRALIAN HEALTH DEPARTMENT

Donovan B, Harcourt C, Egger S, Fairley CK, Chen MY, Kaldor JM, Marshall L, O'Connor J, and Tabrizi S. Status report on the female sex industry in Western Australia. \$60,500

Funding from industry

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

GlaxoSmithKline Garland S M, Pitts M, HPV: What are the key messages and how should they be adapted for use in AOGIN countries? \$204,798

Merck-Serono. Williams L, Stern C, Agresta F, Marks J and Ricciardelli L.

Organon Schering-Plough. Stern C, Toledo M, Edgar D, Gook D and Garrett C. Fertility Preservation Service Database.

Other research grants

Angior Family Foundation. Garland SM, Tobin JM, Pirota M, Jacobs S, Tabrizi SN. The use of probiotics to reduce infections in premature neonates. \$60,000

ARC Rosenthal D, Rowe H, Mallett S, Hardiman EA and Kirkman M. ARC Linkage grant. \$80,000

ARC Discovery. Pitts MK, Peterson KA, Baker HWG. ART of making babies: how human embryo research and assisted reproduction are regulated in Australia and New Zealand. \$113,000

Australian Cancer Research Funds (equipment grant). Ahmed N, Findlay J. Ovarian cancer research. \$127,000

Beyondblue. Baird D, Bryant C, Bagga H. An investigation into the effectiveness of CBT Group on anxiety and depression in a disease specific versus a generic chronic disease management model. \$42,000

Cancer Council of Victoria. Garland SM, Gertig D, Wark J, Tabrizi SN, Pitts M, Erbas B. Genetic and environmental factors in invasive cervical cancer: a twin study. \$70,000

Cancer Council of Victoria - Postgraduate Cancer Research Scholarship. Garland S M, Grover SR, Tabrizi SN, Jayasinghe Y. The oncogenic risk of human papillomavirus in children and adolescents: risk factors for early-onset cervical carcinoma and high grade dysplasia. \$81,750

Collier Charitable Trust. Stafford L, Judd F. Psychological, sexual and social outcomes of gestational trophoblastic disease \$88,000

DISHA, Direction for hope (equipment grant). Ahmed N, Quinn M. Identification and characterization of ovarian cancer stem cells. \$27,000

Eirene Lucas Foundation- Equipment Grant. Keogh R. How does low oxygen control blood vessel changes during early pregnancy? \$5000

Harold & Cora Brennen Trust. Kokkinos MI. Equipment grant for the purchase of LUMISTAR luminometer. \$23,000

La Trobe University Faculty Grant. McLachlan H, Forster D, Yelland J, Rayner J, Gold L. An alternative approach to early postnatal care: A pilot randomised controlled trial. \$19,992

La Trobe University Faculty Grant. Amir L, Forster D, Rayner J, Stern K. Women's attitudes to and experiences of breastfeeding – does normal weight make a difference. \$31,772

La Trobe University Research Grants Scheme. Forster D, McLachlan H, Davey MA. Hospital-based versus home-based early postnatal care: a randomised controlled trial - seeding funding for repeat NHMRC application. \$10,000

La Trobe University Research Grants Scheme. Amir L, Forster D, Stern K, Rayner J-A. Women's attitudes and experiences of breastfeeding – does maternal weight make a difference? \$31,772

La Trobe University, Faculty of Health Sciences. Rayner J, Forster D, McLachlan H, Kealy M, Pirota M. The views, experiences and referral patterns of Victorian IVF specialists regarding fertility enhancement by complementary and alternative medicine (CAM). \$19,530

Liz Mann's Funds. Ahmed N. Curative targets involved in the spread of ovarian cancer. \$100,000

Melbourne Business School. Ahmed N, Jock F. Curative targets involved in the spread of ovarian cancer. \$20,000

Murdoch Childrens Research Institute. Spittle A. Investigating motor outcome of very preterm children during pregnancy \$15,000

Nutricia Research Foundation. Halliday J, Lewis S, Ponsonby A-M, Morley R, Forster D, Penny D, Donnan L. Is vitamin D deficiency a risk factor for birth defects? \$51,000

RANZCOG: Arthur Wilson Memorial Scholarship. Garland SM, Grover SR, Tabrizi SN, Jayasinghe Y. The oncogenic risk of human papillomavirus in children and adolescents: risk factors for early-onset cervical carcinoma and high grade dysplasia. \$60,000

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. \$30,000

Royal Women's Hospital Foundation. Bines J, Short R, Forster D, Yow M. Measuring the Somatic Cell Counts in Breast milk from Birth to Weaning. \$38,000

Royal Women's Hospital Foundation. Garland SM, Rowlands S, Tabrizi S. Is amniotic fluid infection with genital Mycoplasma species (Mycoplasma hominis, Mycoplasma genitalium, Ureaplasma urealyticum) in the second trimester associated with an increased risk of preterm delivery? \$32,966

School of Behavioural Science, University of Melbourne. Bryant C, Judd F, Jackson H, Komiti A. Healthy ageing in a rural cohort. \$10,000

Scobie and Clare MacKinnon Trust. Hacking D, Craig J, Saffery R, Davis P, Doyle L. PIES: Premature Infant Epigenetic Study. \$200,000

SIDS & Kids. Colditz PB, East CE. Ambulatory fetal activity monitoring predicts clinical outcome. \$89,000

Victorian Cancer Agency. Garland SM, Grover SR, Tabrizi SN, Jayasinghe Y. Tumour Streams Grant. The oncogenic risk of human papillomavirus in children & adolescents: risk factors for early-onset cervical carcinoma and high-grade dysplasia. \$63,322

Victorian Cancer Agency Grant. Garland SM, Grover S, Tabrizi SN, Jayasinghe Y. The oncogenic risk of HPV in children and adolescents: risk factors for early-onset cervical carcinoma and high-grade cervical dysplasia. \$63,321

Victorian Department of Human Services. Forster D, McLachlan H, Davey M-A, Cotter T, Newton M, Morrow J. An evaluation of maternity service changes at Barwon Health. \$572,562

VQC Victorian Travelling Fellowship 2007-2008. Sheehan P. A study of postnatal review services in tertiary maternity centres. \$30,000

Western and Central Melbourne Integrated Cancer Stream (WCMICS). Stafford L, Judd F. Screening for anxiety and depression in women with gynaecological or breast cancer. \$50,000

Women's Cancer Foundation. Ahmed N, Quinn M. Identification and characterization of ovarian cancer stem cells. \$102,000

World Health Organization. Garland SM, Tabrizi SN. Establishment of global HPV Lab Network Centre for surveillance/monitoring. US\$20,000



**STUDENTS
ELEMENTS**

2008

Postgraduate degrees

PHD

Natalie Barre. Linguistic Ability in Preterm Children at 6 Years of Age: A Diffusion-Weighted Imaging Investigation. University of Melbourne. Supervisors: Dr Peter Anderson, Prof Lex Doyle.

Julia Brotherton. Evaluation of human papillomavirus vaccination in Australia. The University of Sydney. Supervisors: Prof P McIntyre, Prof S Garland, Dr M Saville

Natalie Castrechini. Isolation and characterisation of mesenchymal stem cells from human placental tissues in pregnancy and in the pregnancy pathology fetal growth restriction. Supervisors Dr Bill Kalionis, Dr Padma Murthi, Prof Shaun Brennecke, Dr Neil Gude

Phillis Chua. Neuroimaging and neuropsychological performance in Huntington's chorea. 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

Kimberley Crawford. Interactions between trophoblast-derived proteins and microvascular endothelial cells in the development of pre-eclampsia. University of Melbourne. Supervisors Prof Shaun Brennecke, Dr Neil Gude

Mary-Ann Davey. Birth outcomes and maternal and neonatal morbidity following induction or augmentation of labour in uncomplicated first births. LaTrobe University. Co-supervisor A/Prof James King

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

Abbey Eeles Sensory Profiles of infants <30 weeks' gestational age - The first 2 years of life. University of Melbourne. Supervisors Prof Lex Doyle, Dr Nisha Brown, Dr Peter Anderson

Alice Forwood. Social support and postnatal depression. University of Melbourne. Supervisor Prof Fiona Judd

Kerry Gemmel. Resilience in older women with gynaecological cancer. University of Melbourne. Supervisor Dr. Fiona Judd.

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

Annarella Hardiman. Women's views about services for unplanned / unwanted pregnancy and abortion – recommendations for best practice models of service delivery.

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

Jacqueline Jauncey-Cooke. Optimising Paediatric Ventilation. University of Queensland. Supervisor Dr Chris East.

Yasmin Jaysinghe. Risk factors for early-onset cervical carcinoma and its precursor lesion, high grade cervical dysplasia: are there high risk groups that require earlier Papanicolaou (Pap) cervical cytology screening and human papillomavirus (HPV) vaccination? Murdoch Childrens Research Institute. Supervisors Prof Susan Garland, A/Prof S. Grover and A/Prof S. Tabrizi

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

Jeremy Lim. Working memory functioning in children born very preterm: Nature of deficits and early neuroanatomical correlates. University of Melbourne. Supervisors Dr Peter Anderson, Prof Lex Doyle

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

Carly Molloy. Visual spatial information processing in extremely low birth weight and/or very preterm adolescents: perinatal risk factors and relationship with functional outcomes. University of Melbourne. Supervisors Dr Peter Anderson, Prof Lex W Doyle

Jane Morrow. An evaluation of maternity services changes at Barwon Health. University of Melbourne. Supervisor Dr Della Forster.

Karen New. Transfer of preterm infants from incubator to open cot: a review of contemporary practice, an RCT and systematic review. University of Queensland. Supervisor Dr Christine East.

Michelle Newton. Introducing a caseload midwifery model: an exploration of caseload midwives, key stakeholders and the socio-political context. University of Melbourne. Supervisor Dr Della Forster.

Susan Nicholson. AMPLE - Adolescent Mother' Project - Let's Explore your baby as a person. University of Melbourne. Supervisor Dr Fiona Judd.

Cameron Nowell. Apoptosis in human fetal membranes: a critical cue for extracellular matrix proteolysis. Supervisors, Prof Shaun Brennecke

Pollard A. The effectiveness of a randomised controlled trial of a behavioural intervention to promote adoption of and adherence to health behaviours in breast cancer survivors. University of Melbourne. Supervisor Dr Christina Bryant

Wendy Pollock. Obstetric admissions to ICU in Victoria. University of Melbourne. Supervisor A/Prof James King

Sharon Quin. Isolation and characterisation of fetal and maternal mesenchymal stem cells from the human placenta. University of Melbourne. Supervisors Dr Bill Kalionis, Dr Rishika Pace and Prof Shaun Brennecke.

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. Profiles of School Readiness in Very Preterm Children: Perinatal, Neurological and Psychosocial Determinants. University of Melbourne. Supervisor Prof Lex W Doyle

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

Dr Georg Schmoelzer. Respiratory function monitoring in the delivery room. University of Melbourne. Supervisor Prof Peter Davis

Kristy Shield. In vitro spheroids and metastatic ovarian carcinoma Deakin University. Supervisors Dr Nuzhat Ahmed, A/Prof Leigh Ackland and Prof Greg Rice.

Alicia Spittle. The effects of a randomised controlled trial of a preventative care program at home on motor outcome for preterm infants over the first year of life. 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

Sarah Tan. Investigation of an epidemic of vulvar cancer in young women: The role of human papillomavirus and generic susceptibility Supervisors Prof S. Garland, A/Prof S. Grover and A/Prof S. Tabrizi

Arjan te Pas. Investigating patterns of breathing after birth. Supervisors Prof Colin Morley, A/Prof Peter Davis

Deanne Thompson. Understanding white matter development in preterm infants utilising MRI. University of Melbourne. Supervisors A/Prof Garry Egan, A/Prof Terrie Inder, Prof Lex W Doyle

Shere Wang. The effects of an educational program regarding menopausal knowledge, attitude and self-care behaviours of middle-aged women in northern Taiwan University of Melbourne. Supervisor Prof Jeremy Oats

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

Kevin Wheeler. Volume guarantee ventilation. University of Melbourne. Supervisor Prof Peter Davis.

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 cooling for term newborns with hypoxic-ischaemic encephalopathy. University of Melbourne. Supervisors Prof Lex W Doyle, Prof Colin Morley

Omar Kamlin. Studies of ventilation in the delivery room and ICU. University of Melbourne. Supervisor Prof Peter Davis

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

Louise Owen. Nasal intermittent positive pressure ventilation. University of Melbourne. Supervisors Prof Colin Morley, A/Prof Peter Davis.

Anne Poliness. Identification of protein markers in endometriosis. University of Melbourne. Supervisor Prof Shaun Brennecke

OTHER POSTGRADUATE DEGREES

Barbara Lach. MA. Development of a scale to assess adolescents' readiness for transfer from paediatric to adult services. University of Melbourne. Supervisor Dr Christina Bryant

Ana Torres. MA. Impact of gynaecological cancer on partners. University of Melbourne. Supervisor Dr Christina Bryant

Ana Torres. M Clin Psych. The influence of unmet needs and attachment styles on the perception of relationship satisfaction in gynaecological cancer patients and their partners. University of Melbourne. Supervisor Dr Lesley Stafford

Anthony Talbot. Further testing of the predictive validity of a scale to assess adolescents' readiness for transfer from paediatric to adult services. University of Melbourne. Supervisor Dr Christina Bryant

POST DOCTORAL FELLOWS

Niroshani Pathirage. The role of placental transcription factors in fetal growth restriction. Supervisor Dr Padma Murthi

Rishika Pace. Isolation and characterization of placental mesenchymal stem cells. Supervisors Dr Padma Murthis, Dr Bill Kalionis).

Undergraduate degrees

B MED SC

Pamela Anjara. Expression of stem cell markers in normal and fetal growth restriction affected placentae. University of Melbourne Dr Bill Kalionis

Melissa Chong. Pregnane X Receptor (PXR) in human parturition. University of Melbourne. Supervisor Dr Penny Sheehan

Fazlin Ahmad Faisal. The expression of biglycan in human idiopathic fetal growth restriction. Supervisors Jo Said, Shaun Brennecke, Padma Murthi, Paul Monagle, Vera Ignjatovic

Zina Hijazi. Maternal perception of fetal movement compared to movement detected by real-time ultrasound University of Melbourne. Supervisor Dr Christine East

Alicia Jones. Neonatal Late-Onset Sepsis: Change In Rates From and Old to a New Hospital. University of Melbourne. Supervisor Professor Lex Doyle

Vanisri Muniyandi. Identification of downstream target genes of homeobox gene HEX in placental microvascular endothelial cells. Supervisor Dr Padma Murthi

Kate Robertson. Neonatal hip instability. University of Melbourne. Supervisor Prof Lex W Doyle

Ben Shum. The Natural History of Patent Ductus Arteriosus in Infants < 32 Weeks' Gestation. University of Melbourne. Supervisor Professor Lex Doyle.

Charmaine Enqi Tay. Level of expression of 3BHS enzyme in human idiopathic fetal growth restriction. Supervisor Dr Padma Murthi

Lihini Samarawikrama. Investigating the difference in expression of the enzyme, 11 beta hydroxysteroid dehydrogenase Type 1 in obese and non-obese pregnant women. University of Melbourne. Supervisors Dr Maria Kokkinos and Dr Penny Sheehan

Clara Yip. Homeobox gene TGIF expression in human idiopathic fetal growth restriction. Supervisor Dr Padma Murthi

BSC

Lynsey Marshall. Tracking trophoblast migration and invasion. University of Melbourne. Supervisor Dr Rosemary Keogh

Emma Boehm. Tracking trophoblast migration and invasion. University of Melbourne. Supervisor Dr Rosemary Keogh

PUBLICATIONS

2008

Theses passed

PHD

Dr Alicia Spittle. The effects of a randomised controlled trial of a preventative care program at home on motor outcome for preterm infants over the first year of life. Department of Paediatrics, University of Melbourne. Supervisors Prof Lex W Doyle, A/Prof Ros Boyd, A/Prof Terrie Inder.

Dr Joanne Said. Inherited Thrombophilia and Pregnancy Outcome. Department of Obstetrics and Gynaecology, University of Melbourne. Supervisors: Prof Shaun Brennecke, Prof John Higgins

OTHER

Eleanor D'eath. D Psych. Characterising language function and information processing abilities in extremely low birthweight children born in 1997. Department of Psychology, University of Melbourne. Supervisors Dr Peter Anderson and Prof Lex Doyle

Refereed international journal articles

Ahmed N, Riley C and Quinn M. Immunohistochemical perspective of PPAR β and one of its putative targets PDK1 in normal ovaries, benign and malignant ovarian tumours. *British J of Cancer* 2008; 98/8:1415-24.

Alfaleh K, Smyth JA, Roberts RS, Solimano A, Asztalos EV, Schmidt B, for the Trial of Indomethacin Prophylaxis in Preterms Investigators (incl L Doyle). Prevention and 18-month outcomes of serious pulmonary hemorrhage in extremely low birth weight infants: results from the Trial of Indomethacin Prophylaxis in Preterms. *Pediatrics* 2008; 121; e233-e238.

Armes JE, Lourie R, Bowlay G, Tabrizi SN. Pagetoid Squamous Cell Carcinoma in Situ of the Vulva-comparison with Extramammary Paget's Disease and Non-Pagetoid Squamous Cell Neoplasia. *Int J. Gynecol Pathol* 2008; 27:118-124.

Beauchamp MH, Thompson DK, Howard K, Doyle LW, Egan GF, Inder TE, Anderson PJ. Preterm infant hippocampal volumes correlate with later working memory deficits. *Brain* 2008; 131:2986-2994.

Bekkers RL, van de Nieuwenhof HP, Neesham DE, Hendriks JH, Tan J, Quinn MA. Does experience in colposcopy improve identification of high grade abnormalities? *Eur J Obstet Gynecol Reprod Biol* 2008; 141(1):75-8.

Blashki G, Piterman L, Meadows G, Clarke D, Prabakaran V, Gunn J, Judd F, Allwell L. Impact of an educational intervention on general practitioners' skills in cognitive behavioural strategies: a randomised controlled trial. *Med J Aust* 2008 188: S129-S132.

Brown DR, Garland SM. Cervical Cancer Vaccines. *PPO Updates; Principles and Practice of Oncology* 2008; 22:1-12.

Bryant C, Ames, D, Jackson H. Anxiety in older adults: Methodological issues and a review of the literature. *J Affective Disorders* 2008; 109:233-250.

Cain S, Martinez G, Kokkinos MI, Turner K, Richardson RJ, Abud HE, Huelsken J, Robinson ML, de longh RU. Differential requirement for beta-catenin in epithelial and fiber cells during lens development. *Dev Biol* 2008; 321: 420-33.

Cheong JLY, Hunt RW, Anderson PJ, Howard K, Thompson DK, Wang HX, Bear MJ, Inder TE, Doyle LW. Head growth in preterm infants: correlation with magnetic resonance imaging and neurodevelopmental outcome. *Pediatrics* 2008; 121:e1534-e1540.

Chin LY, Amir LH. Survey of patient satisfaction with the Breastfeeding Education and Support Services of The Royal Women's Hospital, Melbourne. *BMC Health Serv Res* 2008; 8:83.

Cliffe SJ, Tabrizi SN, Sullivan EA on behalf of the Pacific Islands Second Generation Surveillance Group. 2008. Chlamydia in the Pacific region, the silent epidemic. *Sex Transm Dis* 2008; 35:801-6.

Cooklin AR, Donath SM, Amir LH. Maternal employment and breastfeeding: results from the Longitudinal Study of Australian Children. *Acta Paediatr* 2008; 97: 620-23.

Costa AM, Garland SM, Tabrizi SN. Evaluation of LightCycler as a platform for nucleic acid sequence-based amplification (NASBA) in real-time detection of enteroviruses. *Curr Microbiol.* 2008; 56:80-83

- Domingo EJ, Noviani R, Noor MR, Ngelangel CA, Limpaphayom KK, Thuan TV, Louie KS, Quinn MA. Epidemiology and prevention of cervical cancer in Indonesia, Malaysia, the Philippines, Thailand and Vietnam. *Vaccine* 2008; 19:M71-9.
- Donath SM, Amir L. Maternal obesity and initiation and duration of breastfeeding: data from the longitudinal study of Australian children. *Matern Child Nutr* 2008; 4: 163-70.
- Donath SM, Amir LH. The effect of gestation on initiation and duration of breastfeeding. *Arch Dis Child* 2008; 93:F448-50.
- East CE. Fetal pulse oximetry during labor: theory, clinical use and the future. *Pediatric Health* 2008; 2: 787-795.
- Fisher JR, Hammarberg K and Baker HWG. Antenatal mood and fetal attachment after assisted conception. *Fertil Steril* 2008; 89:1103-12.
- Fisher JR, Hammarberg K, Baker HWG and McBain JC. Assessing the health and development of ART-conceived young adults: A study of feasibility, parent recall, and acceptability. *Reprod Health* 2008; 5:7.
- Forster D, McLachlan H, Rayner J, Yelland J, Gold L, Rayner J. The early postnatal period: Exploring women's views, expectations and experiences of care using focus groups in Victoria, Australia. *BMC Pregnancy and Childbirth* 2008; 8:27 (online).
- Forster D, McLachlan H. Women's views and experiences of breastfeeding: positive, negative, or just good for the baby? *Midwifery* 2008; 26: 116-25.
- Garland SM, Brotherton JML, Skinner RS, Pitts M, Saville M, Mola G, Jones RW. Human Papillomavirus and Cervical Cancer in Australasia and Oceania: Risk-factors, Epidemiology and Prevention. *Vaccine* (special HPV Monograph series). 2008; 26:M80-M88. (ICO Monograph Series on HPV and Cervical Cancer: Asia Pacific Regional Report).
- Garland SM, Cuzick J, Domingo EJ, Goldie SJ, Kim YT, Konno R, Parkin DM, Qiao YL, Sankaranarayanan R, Stern PL, Tay SK, Bosch FX. Recommendations of cervical cancer prevention in Asia-Pacific. *Vaccine* (special HPV Monograph series) 2008; 26:M89-M98. (ICO Monograph Series on HPV and Cervical Cancer: Asia Pacific Regional Report).
- Gook, D.A., Edgar, D.H., Borg, J, Martic, M. Detection of zona pellucida proteins during human folliculogenesis. *Human Reproduction* 2008; 23:394-402.
- Groves AM, Kuschel CA, Knight DB, Skinner JR. Does retrograde diastolic flow in the descending aorta signify impaired systemic perfusion in preterm infants? *Pediatr Res* 2008; 63:89-94.
- Groves AM, Kuschel CA, Knight DB, Skinner JR. Echocardiographic assessment of blood flow volume in the superior vena cava and descending aorta in the newborn infant. *Arch Dis Child Fetal Neonatal Ed* 2008; 93:F24-8.
- Groves AM, Kuschel CA, Knight DB, Skinner JR. The relationship between blood pressure and blood flow in newborn preterm infants. *Arch Dis Child Fetal Neonatal Ed* 2008; 93:F29-32.
- Gu VY, Wong MH, Stevenson JL, Crawford KE, Brennecke SP, Gude NM. Calreticulin in pregnancy and pre-eclampsia. *Molecular Human Reproduction* 2008; 14:309-315.
- Hamzic E, Cartwright JE, Keogh RJ, Whitley GS, Greenhill D, Hoppe A. "Live cell image analysis of cell-cell interactions reveals the specific targeting of vascular smooth muscle cells by fetal trophoblasts." *Experimental Cell Research* 2008; 314:1455-64.
- Jamsai D, Reilly A, Smith SJ, Gibbs GM, Baker HWG, McLachlan RI, de Kretser DM and O'Bryan MK. Polymorphisms in the human cysteine-rich secretory protein 2 (CRISP2) gene in Australian men. *Hum Reprod* 2008; 23:2151-9.
- Jensen JS, Bradshaw CS, Tabrizi SN, Fairley CK, Hamasuna R. Azithromycin Treatment Failure in Mycoplasma genitalium-Positive Patients with Nongonococcal Urethritis Is Associated with Induced Macrolide Resistance. *Clin Infect Dis*. 2008; 47:1546-53.
- Jensen JS, Bradshaw CS, Tabrizi SN, Fairley CK, Ryoichi H. Azithromycin treatment failure in Mycoplasma genitalium-positive non-gonococcal urethritis is associated with induced macrolide resistance. *Clinical Infectious Diseases* 2008; 47:1546-53.
- Joura EA, Kjaer SK, Wheeler CM, Sigurdsson K, Iverson O, Hernandez-Avila M, Perez G, Brown DR, Koutsky LA, Tay EH, Garcia P, Ault KA, Garland SM, Leodolter S, Olsson SE, Tang GWK, Ferris DG, Paavonen J, Lehtinen M, Steben M, Bosch X, Dillner J, Kurman RJ, Majewski S, Muñoz N, Myers

ER, Villa LL, Taddeo FJ, Roberts C, Tadesse A, Bryan J, Lupinacci LC, Giacoletti KED, Lu S, Vuocolo S, Hesley TM, Haupt R, Barr E. HPV antibody levels and clinical efficacy following administration of a prophylactic quadrivalent HPV vaccine. *Vaccine*. 2008; 26:6844-6851.

Judd F, Jackson H, Komiti A. How does being female assist help – seeking for mental health problems. *Aust NZ J Psychiatry* 2008; 42:24-29.

Kamlin COF, Dawson JA, O'Donnell CPF, Morley CJ, Donath SM, Sekhon J, Davis PG. Accuracy of Pulse Oximetry Measurement Of Heart Rate of Newly Born Infants In the Delivery Room. *J Pediatr* 2008; 152:756-760.

Kamlin COF, Davis PG, Argus B, Mills B, Morley CJ. A trial of spontaneous breathing to determine the readiness for extubation in very low birth weight infants: a prospective evaluation. *Arch Dis Child Fetal Neonatal Ed* 2008; 93:F305-F306.

Kan E, Roberts G, Anderson PJ, Doyle LW for the Victorian Infant Collaborative Study Group. The association of growth impairment with neuro-developmental outcome at eight years of age in very preterm children. *Early Hum Dev*. 2008; 84:409-416.

Kurniawan ED, Wong MH, Windle I, Rose A, Mou A, Buchanan M, Collins JP, Miller JA, Gruen RL, Mann GB. Predictors of surgical margin status in breast-conserving surgery within a breast screening program. *Ann Surg Oncol*. 2008; 15:2542-9.

Loughran SJ, Kruse EA, Hacking DF, de Graaf CA, Hyland CD, Willson TA, Henley KJ, Ellis S, Voss AK, Metcalf D, Hilton DJ, Alexander WA and Kile BT. Ets related gene (Erg) is essential for definitive hematopoiesis and adult hematopoietic stem cell function. *Nature Immunology* 2008; 9:810-9.

Matic H and McCabe MP. Duration of erectile dysfunction and its relationship to treatment seeking and satisfaction with treatment using PDE5 inhibitors. *Int J Urol* 2008;15:346-9.

McLachlan H, Forster D, Davey M-AD, Lumley J, Farrell T, Oats J, Gold L, Waldenström U, Albers L, Biro MA. COSMOS: Comparing standard maternity care with one-to-one midwifery support. A randomised controlled trial. *BMC Pregnancy and Childbirth*. 2008, 8:35 (online).

Morley CJ, Davis PG, Doyle LW, Brion LP, Hascoet J-M, Carlim JB for the COIN Trial Investigators. Nasal CPAP or intubation at birth for very preterm infants. *N Engl J Med* 2008; 358:700-708.

Moses EK, Johnson MP, Tommerdal L, Forsmo S, Curran JE, Abraham LJ, Charlesworth JC, Brennecke SP, Blangero J, Austgulen R. Genetic association of pre-eclampsia to the inflammatory response gene SEPS1. *Am J Obstet Gynecol* 2008; 198:336.e1-5.

Murray G, Judd F, Jackson H, Fraser C, Komiti A, Pattison P, Weerip A, Robbins S. Big boys don't cry. An investigation of stoicism and its mental health outcomes. *Personality and Individual Differences* 2008; 44:1369 – 1381.

Murthi P, Fitzpatrick E, Borg AJ, Donath S, Brennecke SP, Kalionis B. "GAPDH, 18S rRNA and YWHAZ are suitable endogenous reference genes for relative gene expression studies in placental tissues from human idiopathic fetal growth restriction. *Placenta* 2008; 29:798-801.

O'Donnell CP, Kamlin COF, Davis PG, Morley CJ. Ethical and legal aspects of video recording neonatal resuscitation. *Arch Dis Child Fetal Neonatal Ed* 2008; 93:F82-F84

Owen LS, Morley CJ, Davis PG. Neonatal nasal intermittent positive pressure ventilation: a survey of practice in England. *Arch Dis Child Fetal Neonatal Ed*. 2008; 93:F148-150.

Palma-Dias RS, Fonseca MM, Brietzke E, Fritsch A, Schlatter D, Maurmann CB, Stein NR, Magalhães JA. Screening for placental insufficiency by transvaginaluterine artery Doppler at 22-24 weeks of gestation. *Fetal Diagn Ther* 2008; 24: 462-9.

Rahman S, Garland S, Currie M, Tabrizi SN, Rahman M, Nessa K, Bowden FJ. Prevalence of *Mycoplasma genitalium* in health clinic attendees complaining of vaginal discharge in Bangladesh. *Int. J. STD & AIDS* 2008; 19:772-4.

Rajaraman G, Murthi P, Quinn L, Brennecke SP, Kalionis B. "Homeodomain protein HLX is expressed primarily in cytotrophoblast cell types in early pregnancy human placenta" *Reproduction, Fertility and Development* 2008; 20: 357-367.

Schlatter D, Sanseverino MT, Schmitt JM, Fritsch A, Kessler RG, Barrios PM, Palma-Dias RS, Magalhães JA. Severe fetal hydrocephalus with and without neural tube defect: a comparative study. *Fetal Diagn Ther*. 2008; 23:23-9.

- Shah D, Doyle LW, Anderson PJ, Bear J, Daley AJ, Hunt RW, Inder TE. Adverse neurodevelopment in preterm infants with postnatal sepsis or necrotizing enterocolitis is mediated by white matter abnormalities on magnetic resonance imaging at term. *J Pediatr* 2008; 153: 170-175.
- Shih W, Rushford DD, Bourne H, Garrett C, McBain JC, Healy DL and Baker HWG. Factors affecting low birthweight after assisted reproductive technology: difference between transfer of fresh and cryopreserved embryos suggests an adverse effect of oocyte collection. *Hum Reprod* 2008; 23:1644-53.
- Skandarajah AR, Field L, Mou A, Buchanan M, Evans J, Hart S, Mann GB. Benign papilloma on core biopsy requires surgical excision. *Ann Surg Oncol*. 2008; 15:2272-7.
- Smyth I, Hacking DF, Hilton AA, Mukhamedova N, Meikle PJ, Ellis S, Collinge JE, de Graaf CA, Bahlo M, Sviridov D, Kile BT, Hilton DJ. A mouse model of Harlequin Ichthyosis delineates a key role for Abca12 in lipid homeostasis. *PLoS Genetics*, 2008; 4:e1000192.
- Spittle AJ, Brown NC, Doyle LW, Boyd RN, Hunt RW, Bear M, Inder TE. Quality of general movements is related to white matter pathology in very preterm infants. *Pediatrics* 2008; 121: e1184-9.
- Spittle AJ, Doyle LW, Boyd RN. A systematic review of the clinimetric properties of neuromotor assessments for infants born preterm during the first year of life. *Dev Med Child Neurol* 2008; 50:254-66.
- Spittle AJ, Orton J, Doyle LW and Boyd RN. Cochrane review: Early developmental interventions post hospital discharge to improve motor and cognitive outcomes of preterm infants. *Evidence-Based Child Health: A Cochrane Review Journal*, 2008; 2:145-206.
- Stafford L, Jackson HJ, Berk M. Illness beliefs about heart disease and adherence to secondary prevention regimens. *Psychosomatic Medicine*, 2008; 70:942-8
- Stevens MP, Garland SM, Tabrizi SN. Development and validation of a real-time PCR assay specifically detecting human papillomavirus type 52 using the Roche LightCycler 480 system. *J. Virol. Methods*. 2008; 147:290-296.
- Stevens MP, Garland SM, Tabrizi SN. Validation of an automated detection platform for use with the Roche Linear Array HPV Genotyping Test. *J. Clin Microbiol*. 2008; 46:3813-16.
- Suami H, Pan WR, Mann GB and Taylor GI. The Lymphatic Anatomy of the Breast and its Implications for Sentinel Lymph Node Biopsy: A Human Cadaver Study. *Ann Surg Oncol*. 2008; 15:863-71.
- Sudhakaran S, Rayner CR, Li J, Kong DCM, Gude NM, Nation RL. Inhibition of placental P-glycoprotein: impact on indinavir transfer to the fetus. *Brit J Clin Pharmacol* 2008; 65:667-673.
- Tay EH, Garland SM, Tang G, Nolan T, Huang L-M, Orloski L, Lu S, Barr E. Clinical trial experience with prophylactic HPV 6/11/16/18 VLP vaccine in young women from the Asia-Pacific region. *Int J Gynaecol Obstet*. 2008;102:275-283.
- Te Pas AB, Kamlin COF, Dawson JA, O'Donnell CPF, Morley CJ. Ventilation and spontaneous breathing at birth of infants with congenital diaphragmatic hernia. *J Pediatr* 2008;154: 369-373.
- Te Pas AB, Davis PG, Kamlin COF, Dawson JA, O'Donnell CPF, Morley CJ. Spontaneous breathing patterns of very preterm infants treated with continuous positive airway pressure at birth. *Pediatric Research* 2008; 64:281-285.
- Thompson DK, Wood SJ, Doyle LW, Warfield SK, Lodygensky GA, Anderson PJ, Egan GF, Inder TE. Neonate hippocampal volumes: Prematurity, perinatal predictors, and 2-year outcome. *Annals Neurol* 2008; 63:642-651.
- Vanderlelie J, Gude N, Perkins AV. Antioxidant Gene Expression in Preeclamptic Placentae: A Preliminary Investigation. *Placenta* 2008; 29: 519-522.
- Wills G, Forster D. Nausea and vomiting in pregnancy: What advice do midwives give? *Midwifery* 2008. 24; 390-398.
- Wood FE, Morley CJ, Dawson JA, Kamlin COF, Owen LS, Donath S, Davis PF. Assessing the effectiveness of two round neonatal resuscitation masks: study 1. *Arch Dis Child Fetal Neonatal Ed*. 2008; 93:F235-37

Wood FE, Morley CJ, Dawson JA, Kamlin COF, Owen LS, Donath S, Davis PF. Improved Techniques reduce face mask leak during simulated neonatal resuscitation: Study 2. *Arch Dis Child Fetal Neonatal Ed.* 2008; 93:F230-34.

Wood FE, Morley CJ, Dawson JA, Davis PG. A respiratory function monitor improves mask ventilation. *Arch Dis Child Fetal Neonat Ed.* 2008; 93:F380-1.

Zusterzeel PLM, Bekkers RLM, Hendriks JCM, Neesham DN, Rome RM, Quinn MA. Prognostic factors for recurrence in patients with FIGO Stage 1 and 11, intermediate and high-risk endometrial cancer. *Acta Obstetrica Gynaecologica Scand* 2008; 87:240-246.

Review articles in international journals

Ahmed N, Thompson E, Quinn M. Epithelial-Mesenchymal interconversions in normal ovarian epithelium and ovarian carcinomas: an exception to the norm. *J Cell Physiol.* 2008; 213:581-588.

Chamley LW, Clarke GN. Antisperm antibodies and conception. *Sem Immunopathol* 2008; 29:169-84.

Dawson JA, Davis PG, O'Donnell CPF, Kamlin COF, Morley CJ. Pulse oximetry for monitoring infants in the delivery room: a review. *Arch Dis Child Fetal Neonat Ed* 2008; 92:F4-F7.

East CE, Colditz PB. Intrapartum oximetry of the fetus. *Anesthes Analges* 2008; 105:S59-65.

Garrett C, Liu DY, Baker HWG. Comparison of human sperm morphology models based on zona pellucida selectivity. *Soc Reprod Fertil* 2008; 65:357-61.

Giles E, Doyle LW. Copper in extremely low birth weight (ELBW) or very preterm (<28 weeks) infants. *Neoreviews* 2008; 8:e159-e164.

Giles E, Doyle LW. Zinc in extremely low birth weight (ELBW) or very preterm (<28 weeks) infants. *Neoreviews* 2008; 8:e165-e172.

Gook DA, Edgar DH. Human oocyte cryopreservation. *Hum Reprod Update* 2008; 13:591-605.

Kokkinos MI, Wafai R, Wong MK, Newgreen DF, Thompson EW, Waltham, M. Vimentin and epithelial-mesenchymal transition in human breast cancer - Observations in vitro and in vivo. *Cells Tissues Organs* 2008; 185:191-203.

Liu DY, Baker HWG. Assessment of human sperm function and clinical management of male infertility. *Nat J Androl* 2008; 13:99-109.

Marret S, Doyle LW, Crowther C, Middleton P. Antenatal magnesium sulphate neuroprotection in the preterm infant. *Sem Fetal Neonat Med* 2008; 12:311-317.

Owen LS, Morley CJ, Davis PG. Neonatal nasal intermittent positive pressure ventilation: What do we know in 2007? *Arch Dis Child, Fetal Neonat Ed* 2008; 92:414-418.

Australian refereed journal articles

Amir LH, Donath SM. Socioeconomic status and rates of breastfeeding in Australia: evidence from the 1995, 2001 and 2004/5 National Health Surveys. *Med J Aust* 2008; 189:254-56.

Blashki G, Piterman L, Meadows G, Clarke D, Prabakaran V, Gunn J, Judd F, Allwell L. Impact of an educational intervention on general practitioners' skills in cognitive behavioural strategies: a randomised controlled trial. *Med J Aust* 2008; 188:S129-S132 .

Bodsworth N, Bloch M, McNulty A, Denham I, Doong N, Trottier S, Adena M, Bonney MA, Agnew J, Australian-Canadian FaST Famciclovir Short-Course Herpes Therapy Study Group (including Garland SM). 2-day versus 5-day famciclovir as treatment of recurrences of genital herpes: results of the FaST study. *Sex Health* 2008; 5:219-25.

Buksh MJ, Dai S, Kuschel CA. AP-ROP in an infant with minimal oxygen exposure. *J Paediatr Child Health* 2008; 44:228-30.

Daley AJ, Thorpe S, Garland SM. Varicella and the pregnant woman: Prevention and management. *Aust N Z J Obstet Gynaecol* 2008; 48:26-33.

Grigg M, Judd F, Komiti A, Ryan L. The quality of housing among patients of an area mental health service. *Aust NZ J Psychiat* 2008; 42:224-250.

Judd F, Jackson H, Komiti A. How does being female assist help - seeking for mental health problems. *Aust NZ J Psychiat* 2008; 42:24-29.

Kuschel CA, Bach KP, Webster NJ, Page B, Groves AM, Battin MR. The reliability of 2D and colour Doppler ultrasound in localising longline position. *J Paediatr Child Health* 2008;44:483-7.

Lavery S, Shah DK, Hunt RW, Filan PM, Doyle LW, Inder TE. Single versus bihemispheric amplitude-integrated electroencephalopathography in relation to cerebral injury and outcome in the term encephalopathic infant. *J Paediatr Child Health* 2008; 44:285-90.

Linford W, Forster D. Exploring women's reactions to a diagnosis of endometrial carcinoma: a pilot study of Australian women. *Aust J Advanced Nurs*. 2008; 26; 34-41.

Panjaitan M, Amir LH, Costa AM, Rudland E, Tabrizi SN. Polymerase chain reaction in detection of *Candida albicans* for confirmation of clinical diagnosis of nipple thrush. *Breastfeeding Med* 2008; 3:185-6.

Pollock W, Sullivan E, Nelson S, King JF. Capacity to monitor severe maternal morbidity in Australia. *Aust NZ J Obstet Gynaecol* 2008; 48, 17-25.

Roberts G, Howard K, Spittle AJ, Brown NC, Anderson PJ, Doyle LW. Rates of early intervention services in very preterm children with developmental disabilities at age 2 years. *J Paediatr Child Health*. 2008; 44:276-80.

Robertson A, Azariah S, Bromhead C, Tabrizi S, Blackmore T. Case report: lymphogranuloma venereum in New Zealand. *Sex Health* 2008; 5:369-70.

Said JM, Brennecke SP, Moses EK, Walker SP, Monagle PT, Campbell J, Bryant VJ, Borg AJ, Higgins JR. The prevalence of inherited thrombophilic polymorphisms in an asymptomatic Australian antenatal population. *Aust NZ J Obstet Gynaecol* 2008; 48: 536-541.

Sasadeusz JJ, Silvers JE, Kent HE, Devenish W, Hocking J, Garland SM. Prevalence of HSV 2 Antibody in a Melbourne Antenatal Population Attending a Tertiary Obstetric Hospital. *Aust N Z J Obstet Gynaecol* 2008;48:266-272.

Sheehan P, Ades A, Palma-Dias R. Experience with laparoscopic transabdominal cervico-isthmic cerclage. *Aust N Z J Obstet Gynaecol* 2008; 48:448.

Singh J, Kamlin COF, Morley CJ, O'Donnell CPF, Donath SM, Davis PG. Accuracy of pulse oximetry in assessing heart rate of infants in the neonatal intensive care unit. *J Paediatr Child Health* 2008; 44:273-275.

Skinner SR, Garland SM, Stanley MA, Pitts M, Quinn MA. Human papillomavirus vaccination for the prevention of cervical neoplasia: is it appropriate to vaccinate women older than 26? *Med J Aust*. 2008; 188:238-42.

Stevens MP, Tan SE, Horvath L, Fairley CK, Garland SM, Tabrizi SN. 2008. Absence of a *Chlamydia trachomatis* variant, harbouring a deletion in the cryptic plasmid, in clients of a sexually transmissible infection clinic and antenatal patients in Melbourne. *Commun Dis Intell*. 2008; 32:77-81.

Whiley DM, Garland SM, Harnett G, Lum G, Smith DW, Tabrizi SN, Sloots TP, Tapsall JW. Exploring 'best practice' for nucleic acid detection of *Neisseria gonorrhoeae*. *Sex Health*. 2008; 5:17-23.

Non-refereed Australian Journal Articles

Giles M, Tabrizi SN, Grabsch E, Friedman ND, Kotsanas D, Li H, Korman TM, Daley A. A Comparison of Three Molecular Typing Methods for *Serratia Marcescens* during an Outbreak across four Neonatal Intensive Care Units. *Australian Infection Control* 2008; 12:20-24

Sheehan P. Hyperemesis gravidarum – Assessment and management. *Australian Family Physician* 2008; 36:698-701

Book chapters

Baker HWG, Clarke GN, Liu DY, Stewart TM, Garrett C. Semen analysis and sperm function testing, in: Pathophysiology and Treatment of Male Sexual and Reproductive Dysfunction. Pages 293-300.

Baker HWG, Clarke GN. Management of immunological factors in male infertility, in: Pathophysiology and Treatment of Male Sexual and Reproductive Dysfunction. Pages 419-430.

Clarke GN, Baker HWG. Immunological evaluation, in: Pathophysiology and Treatment of Male Sexual and Reproductive Dysfunction. Pages 271-283

Judd F, Burrows G. Anxiety Disorders, in: Foundations of Clinical Psychiatry (3rd Edition). Pages 144-163

Judd F. Mental Health Policy, in: Analysing Health Policy: a Problem Orientated Approach. Pages 225-239

Morley CJ. Respiratory Distress Syndrome, in: Workbook in Practical Neonatology. Pages 129-152. Eds Polin and Yoder. Published 2007 Saunders, Philadelphia.

Morley CJ. The Neonatal Chest X-ray, in: The Chest X-ray Survival Guide. Eds Delacey, Morley and Berman. Published Elsevier 2007.

Oats J. Pregnancy and Diabetes, in: Matt Cohen's Handbook of Diabetes Management, 8th edition. Pages 139-149.

Reports

Forster DA, Rayner S, McLachlan H, Rayner J, Yelland J, Gold L. Alternative approaches to early postnatal care: exploring women's views. Mother and Child Health Research. La Trobe University, Melbourne. September 2008.

King, JF. The Consultative Council on Obstetric and Paediatric Mortality and Morbidity. Annual Report for 2005, incorporating the 44th Survey of Perinatal deaths in Victoria. 2008

Other publications

Amir LH. GPs and medicines for breastfeeding women. Breastfeed Med 2008; 3:191 (Conference abstract).

Amir LH. Medicines and breastfeeding: information is available on safe use (Letter). Medical Journal of Australia 186(9):485 (letter); correction published 186(11):606.

Dawson JA, Davis PG, Morley CJ. Free flow oxygen delivery using a T-Piece resuscitator. Arch Dis Child Fetal and Neonatal Edition 2007;92:F421 (letter).

Doyle LW, Davis PG, Morley CJ, McPhee A, Carlin JB. The DART study of low-dose dexamethasone therapy: In reply. Pediatrics 120:690-691 (letter).

Bryant C. Book review of The Psychology of Ageing: an Introduction, 4th edition for Australasian Journal on Ageing.

Davey MA, King JF. Perinatal outcomes in birth centers. Birth 2008; 35:85-6; author reply 86

Garland S, Koutsky LA, Human Papillomavirus Vaccine. N Engl J Med 2008; 357:11 (Letter to editor).

Hardiman, A. Are we there yet? Working towards a vision of real choices, rights and access to reproductive rights for all women. Instinct (28) Sexual and Reproductive Health Edition, Royal Women's Hospital, Melbourne.

Hardiman, A. Making Good – a service response to women dealing with unplanned pregnancy and abortion as a result of sexual assault. Women Against Violence (19), Centre Against Sexual Assault, Melbourne.

Holland C, Edwards-Jensen C. Relieving Emotional Distress and Vulnerability for Gynae-Oncology Patients: A paper detailing the need for practitioners to attend to body image and self-esteem as key features of coping with gynae malignancy; Use of massage as a Key stakeholder in effective Multi-disciplinary treatment planning for symptomology (consultation with PMCI). WCMICS Report submissions in July and October.

Holland C. Article summarising PhD thesis. Melbourne University Magazine April:15-6.

Holland C. Evidence based Psycho-social practice in Gynae-Oncology; Combining Emotional Distress and Vulnerability Instruments for effective assessment in Gynae-Oncology (consultation with

PMCI); Multi-site Psycho-emotional Care for Patients (planning/presentation shared casework and methodology between sites: PMCI/RWH Carlton). OSWA Interim Reports submitted to Executive Education sub-committee June, September and October 2007.

Holland C. Review and summary of two invited presentations: 1. Coping and Vulnerability in Women with Gynaecological Malignancy: A Longitudinal Study at Royal Women's Hospital Melbourne; 2. A Portrait of Malignancy: Tales from the Paintings of Patients and their Children. Conference Proceedings, International Conference on Social Work in Health and Mental Health, Hong Kong

Holland C. Social work review built from: "Raising the Titanic: Rescuing Social Work Documentation from the Sea of Ethical Risk" Original Authors- Cumming, Fitzpatrick et al Aust Social Work, 60, 2, June pages 239-257.

Holland C. The Family Court continues to battle with adequate protection of children exposed to family violence and abuse. The 'unacceptable risk' test and its interaction with the newly enacted Family Law Amendment (Shared Parental Responsibility) Act 2006 provide the best way forward to finding a test that is reliably predictive. Post-graduate LLM Paper Monash University.

Panjaitan M, Amir LH, Costa A-M, Rudland E, Tabrizi S. PCR in detection of *Candida albicans* for confirmation of clinical diagnosis of nipple thrush (Letter). Breastfeed Med 2008; 3: 185-87.

Wilton L. In vitro fertilization with preimplantation genetic screening. N Engl J Med 357:1770 (letter).

PRESENTATIONS

2008

Invited international presentations

DR LISA AMIR

Breastfeeding problems. Public lecture, Kitasato University

Breastfeeding area: no smoking or drinking allowed? Gold08 online conference

PROF PETER DAVIS

Postpartum oxygen saturation in premature infants. VIII International Perinatal Symposium, Santiago, Chile

Early CPAP in premature infants. VIII International Perinatal Symposium, Santiago, Chile

Evaluation of equipment used in CPAP. VIII International Perinatal Symposium, Santiago, Chile

NCPAP: Scientific and Clinical Rationale. VIII International Perinatal Symposium, Santiago, Chile

Lessons from video and physiological recordings in the delivery room. Neonatal Resuscitation Research Workshop, Honolulu

Systematic reviews and meta-analysis: Strengths and weaknesses. First Symposium on Clinical Research in Infant and Maternal Health, Buenos Aires

Ethics of research in the delivery room. First Symposium on Clinical Research in Infant and Maternal Health, Buenos Aires.

The history of caffeine for the treatment of neonatal apnoea. Fifth International Symposium in Neonatology, Buenos Aires.

Cooling: Fact or fiction Fifth. International Symposium in Neonatology, Buenos Aires

Oximetry in the delivery room. Fifth International Symposium in Neonatology, Buenos Aires

Air versus oxygen for neonatal resuscitation. Fifth International Symposium in Neonatology, Buenos Aires

NCPAP: devices and clinical indications. Fifth International Symposium in Neonatology, Buenos Aires

Strategies for neonatal resuscitation. Fifth International Symposium in Neonatology, Buenos Aires

Nasal CPAP - Scientific and clinical rationale. Inaugural Conference of Neonatal Nurses College of New Zealand, Hamilton

Nasal CPAP a decade on - Where are we now and where are we going? Inaugural Conference of Neonatal Nurses College of New Zealand, Hamilton

Air versus oxygen for neonatal resuscitation. Inaugural Conference of Neonatal Nurses College of New Zealand, Hamilton

Caffeine for apnea of prematurity. Inaugural Conference of Neonatal Nurses College of New Zealand, Hamilton

PROF LEX DOYLE

Long-term outcomes for resuscitation studies. Neonatal Resuscitation Research Workshop Honolulu, USA

Postnatal corticosteroids: Saint or Sinner? Annual International Neonatal Conference Middlesborough, UK

Longer-term outcomes of very preterm infants. Annual International Neonatal Conference Middlesborough, UK

Intensive care for the tiniest and most preterm infants - is it worth it? Recent Advances in Neonatal Medicine Workshop Wurzburg, Germany

DR DAVID EDGAR

Selecting the best embryo for transfer in ART. 10th ART Workshop Chongqing, China

Outcomes from cryopreserved cleavage stage embryos. 10th ART Workshop Chongqing, China

DR DELLA FORSTER

Diabetes & antenatal milk expressing (DAME): a pilot study. Dalarna University Falun, Sweden

An individualised, flexible approach to postnatal care: a pilot project to inform the development of a randomised controlled trial. Karolinska Institutet Stockholm, Sweden

PROF SUZANNE GARLAND

The prophylactic HPB vaccine Gardasil: an update. 1st Scientific Meeting of HPV Society. Geneva, Switzerland

Standardization of HPV Assays and the Role of HPV LabNet in Supporting HPV Vaccine Introduction. WHO Meeting WHO Headquarters, Geneva, Switzerland

Development of HPV LabNet Newsletter: comments and issues. 8th International Scientific Meeting of Obstetrics and Gynaecology Thessaloniki, Greece

Progress review from HPV LabNet laboratories: Western Pacific Region. 8th International Scientific Meeting of Obstetrics and Gynaecology Thessaloniki, Greece

Human Papillomavirus Vaccines. The prophylactic HPV vaccine Gardasil: Latest data. 8th International Scientific Meeting of Obstetrics and Gynaecology Thessaloniki, Greece

HPV vaccines: current status and future potential, 15th International Union Against Sexually Transmitted Infections - Asia Pacific Congress Dubai, UAE

Regional Reports for Latin America and Asia Pacific regions. General Peer review meeting, Human Papillomavirus (HPV) & Genital Cancer Prevention Monograph Program Barcelona, Spain

Normal Vaginal Flora. 5th International vaginitis meeting Istanbul, Turkey

Public Awareness and psychological aspects of HPV vaccination. 3rd Biennial Conference of Asia Oceania research organisation on Genital Infections & Neoplasia (AOGIN) Seoul, Korea

Key concerns relating to cervical cancer-the disease and its prevention. 3rd Biennial Conference of Asia Oceania research organisation on Genital Infections & Neoplasia (AOGIN) Seoul, Korea

The need for educating the public and about HPV and cervical cancer prevention. 3rd Biennial Conference of Asia Oceania research organisation on Genital Infections & Neoplasia (AOGIN) Seoul, Korea

Long Term benefits of the Quadrivalent Human Papillomavirus vaccine. 13th International Congress on Infectious Disease (ICID) Kuala Lumpur, Malaysia

Towards Prevention of Cervical Cancer & Beyond. 13th International Congress on Infectious Disease (ICID) Kuala Lumpur, Malaysia

Update on GARDISIL Clinical Data. 13th International Congress on Infectious Disease (ICID) Kuala Lumpur, Malaysia

Update on vaccine uptake internationally. Presented to FIGO Working Group on Combating Cervical Cancer London, England

Safety of quadrivalent human papillomavirus (HPV) (types 6, 11, 16, 18) L1 virus-like particle (MLP) vaccine in pregnant women. IDSOG Seattle, Washington, USA

Application of HPV vaccines. UICC 2008 World Cancer Congress Geneva, Switzerland

Quadrivalent HPV Vaccine - Clinical Efficacy & Safety Update. HPV Vaccine International Meeting Tokyo Narita, Japan

Quadrivalent HPV Vaccine: helping to protect against the Burden of Diseases caused by HPV types 6, 11, 16 and 18: clinical efficacy and safety. Merck Symposium at the International Federation of Cervical Pathology and Colposcopy (WCCPC) Auckland, NZ

Natural History of Genital Warts. The XIII World Congress of the International Federation of Cervical Pathology and Colposcopy (WCCPC) Auckland, NZ

HPV epidemiology in the HPV vaccine era. 48th Annual ICAAC/IDSA 46th Annual Meeting Washington DC, USA

Prophylactic HPV vaccine rollout in Australia: challenges and lessons learnt. International symposium on Human Papillomavirus associated cancers: translating research into cancer prevention and medicine. Thiruvananthapuram, Kerala state, India

Introduction and acceptance of HPV vaccines: Australian perspectives. EUROGIN Nice, France

New Challenges. EUROGIN Nice, France

Natural History of Genital Warts: Analysis of the Placebo Arm of 2 Randomized Phase 3 Trials of a Quadrivalent HPV 6, 11, 16, 18 Vaccine. EUROGIN Nice, France

Immunogenicity and Safety of HPV Prophylactic Vaccines in Clinical Practice" EUROGIN Nice, France

Development of HPV LabNet Newsletter: comments and issues. WHO HPV LabNet WHO Headquarters, Geneva, Switzerland

Progress review from HPV LabNet laboratories: Western Pacific Region. WHO HPV LabNet

WHINURS study: A project to monitor HPV vaccination impact, in Australia (Women, HPV prevalence, Indigenous, Non-indigenous, Urban, Rural, Study). WHO HPV LabNet

The biological mechanism of the effectiveness of HPV vaccination. Incorporating HPV Vaccination into Screening Programmes for Cervix Cancer IARC Milan, Italy

DR DOUGLAS HACKING

Mouse Models of human disease. Neonatal Update Course, Imperial College London, England

Lecture: ENU mutagenesis in Developmental Biology. Wellcome Trust Centre for Human Genetics Oxford, England

DR BILL KALIONIS

Workshop Speaker/Trophoblast Award Committee. European Placenta Group Meeting: Identification of homeobox genes expressed in placental mesenchymal stem cells. 14th International Federation of Placenta Associations (IFPA) Conference Austria

DR OMAR KAMLIN

International Workshop on Neonatal Resuscitation Honolulu, USA

PROF JAMES KING

Measuring performance in Obstetrics. Annual 'Anu' Lecture University College, Cork, Ireland

PROF COLIN MORLEY

Several aspects of neonatal ventilation: A lecture tour. Bangkok, Kuala Lumpur and Singapore

Lecture "Pitfalls in neonatal resuscitations" and three workshops on non-invasive ventilation. Advanced ventilation workshop Middlesborough, UK

Controversies in Neonatal Care – to intubate or not to intubate? Annual International Neonatal Conference Middlesborough, UK

Controversies and Conundrums. Annual International Neonatal Conference Middlesborough, UK

Advances in Neonatal Resuscitation. 6th International Symposium on Neonatology Rio de Janeiro, Brazil

The COIN Trial. 6th International Symposium on Neonatology Rio de Janeiro, Brazil

Oximetry during neonatal resuscitation. 6th International Symposium on Neonatology Rio de Janeiro, Brazil

Delivery Room care of newborn infants. 3rd Neonatal Study Day, National Maternity Hospital, Holles St Dublin, Ireland

What we have learned from video and physiological recordings during resuscitation. Neonatal Grand Round Graz, Austria

Pulse oximetry for monitoring infants in the delivery room" Recent Advances in Neonatal Medicine Workshop Wurzburg, Germany

Improving respiratory care after birth. Recent Advances in Neonatal Medicine Workshop Wurzburg, Germany

New ideas about neonatal resuscitation. The 53rd Annual Meeting of Japan Society for Premature and Newborn Medicine Sapporo, Japan

Oxygen treatment for premature infants. The 53rd Annual Meeting of Japan Society for Premature and Newborn Medicine Sapporo, Japan

DR PADMA MURTHI

Two workshop presentations IFPA symposium, Austria

PROF MICHAEL QUINN

IGCS Biennial Meeting Bangkok, Thailand

DR SEPEHR TABRIZI

How good is NAAT in detection of Neisseria gonorrhoeae? IGCS Biennial Meeting Dubai, UAE

Validation of modifications to Roche Amplicor and Linear Array Human Papillomavirus Genotyping Test. IGCS Biennial Meeting Taupo, NZ

Chlamydia trachomatis detection and genotyping update from recent studies in Melbourne. IGCS Biennial Meeting Taupo, NZ

Quality Assurance in HPV testing. IGCS Biennial Meeting Auckland, NZ

Invited Australian presentations

DR NUZAT AHMED

Symposium on ovarian cancer – Research Presentation. Royal Women's Hospital

PROF PETER DAVIS

Data monitoring committees – group processes. Wombat Workshop, Melbourne

RCT Methods. Wombat Collaboration, Gold Coast

Improving rates of successful extubation. Royal Brisbane and Women's Hospitals

Ethics of research and audit in the delivery room. Royal Brisbane and Women's Hospitals

Systematic reviews and meta-analyses. Perinatal Society of Australia and New Zealand – Brisbane

PROF LEX DOYLE

The effect of changes in perinatal care over the past 50 years on outcomes for very tiny or preterm infants. Post Graduate Conference. Monash Medical Centre, Melbourne

DR DAVID EDGAR

Learning initiatives for Fertility Experts (LIFE) – “Egg Banking” Sydney

Serono Symposia International – “Birth of the Cool: cryopreservation of human embryos and oocytes” Brisbane

DR DELLA FORSTER

Selecting the research design to suit your question. School of Nursing and Midwifery, La Trobe University, research seminar

Diabetes & antenatal milk expressing (DAME): a pilot study. Geelong region breastfeeding annual meeting

PROF SUZANNE GARLAND

Safe-as possible sex. Concurrent Workshop – Women's Health Conference. Gold Coast

Optimising therapy; pushing the boundaries in herpes management” Novartis meeting, Melbourne

Evaluation of Self-Collected Urine Dip (SCUD) Swab Method for Detection of Urethral Chlamydia Infection. Australian Society for Microbiology (ASM), Melbourne

Natural history of genital warts: placebo arm of FUTURE trials” Cervical Cancer Not Yet Beaten: and at what cost? HPV Forum, Melbourne

HPV and other cancers. Cervical Cancer Not Yet Beaten: and at what cost? HPV Forum, Melbourne

HPV Genotype Prevalence in Australian Women Pre-HPV Vaccine Rollout. RWH Research Meeting, Melbourne

HPV Genotype Prevalence in Australian Women Pre-HPV Vaccine Rollout. Tri-State 2008 – Scientific Program, Alice Springs

HPV Genotype Prevalence in Australian Women Pre-HPV Vaccine Rollout. Australiasian Sexual Health Conference, Perth

Update data on WHINURS project. 11th National Immunisation Conference 2008/2008 PHAA Immunisation Conference, Gold Coast

Will HPV vaccination prevent cervical cancer and related disease in Indigenous and non-Indigenous Australian women? 11th National Immunisation Conference 2008/2008 PHAA Immunisation Conference, Gold Coast

How do we actively measure HPV vaccine effectiveness? Royal Women's Hospital Bimonthly Research Seminar

Antimicrobial Resistance in Group B Streptococcus: A National Perspective. Australian Institute of Medical Scientist National Scientific Meeting, Melbourne

Human Papillomavirus Vaccines for Cervical Cancer. Western Pacific Regional Congress (WPRC) of the Medical Women's International Association (MWIA), Melbourne

Vaccines for Cervical Cancer. Western Pacific Regional Congress (WPRC) of the Medical Women's International Association (MWIA), Melbourne

DR BILL KALIONIS

Workshop Organiser/Speaker “The role of mesenchymal stem cells in normal and abnormal placental development” Royal Women's Hospital Research Symposium /ANZPRA Satellite Meeting

DR OMAR KAMLIN

Colin Morley's Festschrift University of Melbourne

DR CARL KUSCHEL

Evidence for the current management of hypotension. First Symposium on Functional Echocardiography and Neonatal Haemodynamics, Melbourne

Designing NICUs: an Australasian experience. The Physical and Developmental Environment of the High Risk Infant: Gravens Down Under. Gold Coast

Incorporating family-centered care into NICU Design. The Physical and Developmental Environment of the High Risk Infant: Gravens Down Under. Gold Coast

PROF COLIN MORLEY

Making babies better. The Royal Women's Hospital's contribution to neonatal research over 50 years. Tracy Maund Oration. The Royal Women's Hospital, Melbourne

Lessons from video and physiological recordings of neonatal resuscitation. Perinatal Society of Australia and New Zealand

DR PADMA MURTHI

Oral Presentation Society of Reproductive Biology, Melbourne

PROF MICHAEL QUINN

Melbourne, Women's Health Conference

DR ALICIA SPITTLE

Spittle AJ, Doyle LW, Boyd RN, Inder TE. The role of qualitative MRI and General Movements assessments in predicting motor outcome of very preterm infants at 12 months. PSANZ 12th Annual Congress, Gold Coast

Spittle AJ, Doyle LW, Boyd RN, Inder TE. The Validity of MRI and General Movements Assessments in Predicting Motor Outcome in Very Preterm Infants. 3rd Australasian Academy of Cerebral Palsy and Developmental Medicine Conference, Brisbane

DR SEPEHR TABRIZI

Presentation: Human papillomavirus testing methodology and quality assurance. Serology Workshop, Australian Society for Microbiology Annual Scientific Meeting, Melbourne

Presentation: Human papillomavirus testing methodology. Australian Institute of Medical Scientist National Scientific Meeting, Melbourne

Presentation: Human papillomavirus DNA testing and Quality Assurance Program. Australian Society of Cytology 38th Annual Scientific Meeting. Sydney

DR FRANCES THOMSON SALO

Presented paper in Professional Development program: The importance of infant mental health. Albert Road Clinic, Melbourne

Being a parent, Recognising parenthood in psychotherapy. RANZCP psychotherapy section 10th Annual David Ingamells memorial Lecture, Melbourne

Perinatal Depression. Eastern Region Network of Community Health Counsellors, Hawthorn

Recognising and treating attachment disorders in adolescents. School counsellors and psychologists conference, Melbourne

DR KEVIN WHEELER

Surfactant Administration During Assist Control-Volume Guarantee (AC-VG) Ventilation: What Happens to Flow, Tidal Volume And Inflating Pressures? Perinatal Society of Australia and New Zealand Annual Congress, Gold Coast

Other international presentations

Allison B, Crossley K, Flecknoe S, Morley C J, Hooper S. Effect of Acute Ventilation on Secondary Septal Crests Densities in Very Immature Fetal Sheep. SPR Hawaii

Amir L. GPs and medicines for breastfeeding women (Poster) Academy of Breastfeeding Medicine annual meeting, Detroit USA

Amir L. GPs and medicines for breastfeeding women (Poster) International Lactation Consultants Association annual conference, Las Vegas USA

Amir L. Maternal alcohol consumption and diet, and initiation and duration of breastfeeding: Data from the Longitudinal Study of Australian Children. (Poster) International Society for Research in Human Milk and Lactation, Perth, Australia

Bhatia R, Wong C, Davis PG, Doyle LW, Morley CJ. Pneumothorax in very preterm infants started on nasal continuous positive airway pressure (NCPAP) versus mechanical ventilation. Pediatric Academic Societies, Annual Meeting 2008, Honolulu, USA

Cheong J, Thompson D, Wang H, Hunt R, Inder T, Doyle L. Abnormal white matter signal on MRI is related to abnormal tissue microstructure. Pediatric Academic Societies; Annual Meeting 2008, Honolulu, USA

Davis PG, Schmidt B, Roberts R, Doyle LW, Asztalos E, Haslam R, Sinha S, Tine, W for the CAP Investigators. Caffeine for apnea of prematurity (CAP) trial: Benefits may vary in subgroups. Pediatric Academic Societies, Annual Meeting 2008, Honolulu, USA

Dawson JA, Kamlin COF, Wong C, Te Pas AM, Davis PG, Morley CJ. Heart rate measurements in healthy newborn infants. Pediatric Academic Societies, Annual Meeting 2008, Honolulu, USA

Dawson, J. C. C. Kamlin O., Wong C, Te Pas A. B., Davis P G., Morley C J. Heart Rate in Normal Infants in the First Ten Minutes After Birth. Pediatric Academic Societies, Annual Meeting 2008, Honolulu, USA

Dhulia A, Crossman R, Stewart M, Kamlin O, Davis PG, Dawson JA, Tingay D, Morley. CJ Effects on oxygen saturations. Pediatric Academic Societies, Annual Meeting 2008, Honolulu, USA

East C. Hypertension in Pregnancy, abstract 486 Washington DC, USA

East C. Hypertension in Pregnancy, abstract 699 Washington DC, USA

Edgar D. Metabolic modification of culture medium by human embryos; correlations with embryonic characteristics and outcome in singel embryo transfers. European Society for Human Reproduction and Embryology Annual Meeting, Barcelona, Spain

Fink AM, Palma-Dias RS, McGillivray G. Fetal MRI reveals a kindred with variable expression of posterior fossa anomalies. 2nd International Congress in Fetal MRI, Vienna Austria

Garland SM. AOGIN: a new initiative in Asia to reduce cervical cancer. UICC 2008 World Cancer Congress, Geneva, Switzerland

Garland SM. Difference Does Matter with HPV Vaccine Mass Immunisation Programs. Critical Issues for Mass Immunisation of HPV Vaccine in Mixed Culture Communities from the Australian Experience. XIII World Congress of the International Federation of Cervical Pathology and Colposcopy. Auckland, New Zealand

Garland SM. HPV 6/11/16/18 vaccine efficacy against cervical disease in subjects with prior vaccine HPV type infection. 13th International Congress on Infectious Disease (ICID). Kuala Lumpur, Malaysia

Garland SM. Human Papillomavirus (HPV) Surveillance Working Party. Merck Global Advisory Board meeting, Philadelphia, USA

Garland SM. Intrauterine devices: knowledge and practices of Australian gynaecologists. Asia-Pacific Council on Contraception (APCOC) Macau, China

Garland SM. Prevention of Cervical Cancer in the Asia Pacific Region: Progress and Challenges on HPV Vaccination and Screening: The ICO Monograph Series on the Cervical Cancer Prevention. 3rd Biennial Conference of Asia Oceania research organization on Genital Infections & Neoplasia (AOGIN) Seoul, Korea

Garland SM. Singaporean women's knowledge of human papillomavirus (HPV) and attitudes towards HPV vaccination' UICC 2008 World Cancer Congress, Geneva, Switzerland

Garland SM. Singaporean women's knowledge of human papillomavirus (HPV) and attitudes towards HPV vaccination. 48th Annual ICAAC/ IDSA 46th Annual Meeting. Washington DC, USA

- Garland SM. Why the introduction of sensitive vaccines require different approaches in Indigenous communities. Findings from a HPV vaccine attitude study in two Australian Aboriginal Communities and lessons for interantional Indigenous communities. XIII World Congress of the International Federation of Cervical Pathology and Colposcopy. Auckland, New Zealand
- Gerber A, Dawson JA, Kamlin COF, Davis PG, Morley CJ. Comparison of Three Neonatal Resuscitation Devices Which Deliver PEEP. Pediatric Academic Societies, Annual Meeting 2008, Honolulu, USA
- Hacking D. ABCA12 in development. Pediatric Academic Societies, Annual Meeting 2008, Honolulu, USA
- Hacking D. Erg in Embryogeneis. Pediatric Academic Societies, Annual Meeting 2008, Honolulu, USA
- Hussein F, Dawson JA, Davis PG, Morley CJ. Use of PEEP valve with neonatal self-inflating device. Society of Pediatric Research, Annual Meeting 2008, Honolulu, USA
- Joubert, L., Thomson-Salo, F., Holland, C. My kite won't fly: Excerpts from practice models in palliative care - working with the parent as patient and small children as young carers. 11th World Congress of World Association of Infant Mental Health, Japan.
- Kalionis B. Potential role of mesenchymal stem cells in the function of microvessels. Placental Endothelium and Endothelial Progenitor Cells Workshop, Medical University of Graz, Austria
- Kalionis B. The role of homeobox genes in the human placenta. Medical University of Vienna, Austria
- Makrides M, Gibson RA, Collins CT, McPhee AJ, Ryan P, Davis PG, Doyle LW, Simmer K, French N, Morris S, Colditz PB, Smithers LG, Willson K, Best KP. Does high-dose dietary docosahexaenoic acid (DHA) improve the neurodevelopmental outcome of preterm infants? Pediatric Academic Societies; Annual Meeting 2008, Honolulu, USA
- Mills BA, Davis PG, Clucas LM, Donath SM, Doyle LW. Compliance with pulse oximetry alarm limits: Effects of a randomised controlled trial of oxygen targeting (BOOST II). Pediatric Academic Societies, Annual Meeting 2008, Honolulu, USA
- Murthi P. Endothelium workshop University of Graz, Austria
- Murthi P. Seminar presentation. University of Paris, France
- Nguyen STT, Shimony JS, Anderson PJ, Hunt RW, Doyle LW, Inder TE. Simple brain metrics on MRI at term predict neurodevelopmental outcome. Pediatric Academic Societies; Annual Meeting 2008, Honolulu, USA
- Schmolzer GM, Te Pas AB, Dawson JA, Kamlin COF, Davis PG, Morley CJ. Respiratory Function Monitor During Stabilisation of Neonates in the Delivery Room (DR). Pediatric Academic Societies, Annual Meeting 2008, Honolulu, USA
- Sheehan P. The Pregnane X Receptor and Human Labour at Term (Abstract presentation) Royal College of Obstetricians and Gynaecologists 7th International Scientific Meeting 2008 (joint meeting with SOCOG and ACOG), Montreal, Canada
- te Pas A B, Kamlin O, Davis P G, Jennifer A. Dawson, O'Donnell C P F, Sokol J, Stewart M , Morley C J. Spontaneous Breathing and Manual Ventilation of Infants with Congenital Diaphragmatic Hernia in the Delivery Room. Pediatric Academic Societies, Annual Meeting 2008, Honolulu, USA
- Te Pas AB, Davis PG, Kamlin COF, Dawson JA, O'Donnell CPF, Morley CJ. Spontaneous breathing patterns of preterm infants treated with continuous positive airway pressure at birth. Pediatric Academic Societies, Annual Meeting 2008, Honolulu, USA
- Te Pas AB, Davis PG, Wong C, Kamlin COF, Dawson JA, Morley CJ. Term infants at birth mostly break expiration by crying. Pediatric Academic Societies, Annual Meeting 2008, Honolulu, USA
- Wallace M J, Zahra V A, Morley C J, Hooper S. CCN Genes in Lung Development and Ventilator-Induced Lung Injury in the Neonate. Pediatric Academic Societies, Annual Meeting 2008, Honolulu, USA
- Wheeler K. Surfactant Administration During AC/ VG Ventilation: What Happens to Ventilatory Parameters? Pediatric Academic Societies, Annual Meeting 2008, Honolulu, USA
- Wheeler K. Surfactant Administration during Assist Control/Volume Guarantee Ventilation. Neonatal Society, London UK

Wheeler K., Kamlin O, Davis P. G, Morley C. J.
Surfactant Administration During AC/VG Ventilation:
What Happens to Ventilatory Parameters? Pediatric
Academic Societies, Annual Meeting 2008,
Honolulu, USA

Other Australian presentations

Agresta F. Research, an integral part of any IVF unit. Fertility Society of Australia Annual Scientific Meeting, Brisbane

Amir L. Breastfeeding problems in general practice WONCA Asia Pacific Regional Conference, Melbourne

Amir L. GPs and medicines for breastfeeding women. National Medicines Symposium, Canberra

Amir L. Maternal obesity and breastfeeding. Perinatal Society of Australia and New Zealand Victoria branch

Amir L. Poverty, human development and infant feeding. College of Lactation Consultants, Melbourne

Barton T. Analysis of pregnancies achieved on natural thaw cycles as determined by Seratec or serum LH levels. Fertility Society of Australia Annual Scientific Meeting, Brisbane

Bhatia R, Wong C, Davis PG, Doyle LW, Morley CJ. Pneumothorax in very preterm infants started on nasal continuous positive airway pressure (NCPAP) versus mechanical ventilation. Perinatal Society of Australia and New Zealand, 12th Annual Congress, Gold Coast

Bourne H. Clinical experience using sperm frozen in microdrops for patients with non obstructive azoospermia. Fertility Society of Australia Annual Scientific Meeting, Brisbane

Bourne H. Sperm frozen in microdrops – detrimental effect of the oil overlay. Fertility Society of Australia Annual Scientific Meeting, Brisbane

Cheong J, Thompson D, Wang H, Hunt R, Inder T, Doyle L. Abnormal white matter signal on MRI is related to abnormal tissue microstructure. Perinatal Society of Australia and New Zealand, 12th Annual Congress, Gold Coast

Dawson JA, Gerber A, Kamlin COF, Davis PG, Morley CJ. Providing PEEP during neonatal resuscitation: Which device is best? Perinatal Society of Australia and New Zealand, 12th Annual Congress, Gold Coast

Dawson JA, Kamlin COF, Wong C, Te Pas AB, Davis PG, Morley CJ. Heart rate measurements in healthy newborn infants. Perinatal Society of Australia and New Zealand, 12th Annual Congress, Gold Coast

Dawson JA, Wong C, Te Pas AB, Kamlin COF, O'Donnell CPF, Davis PG, Morley CJ. Delivery room oxygen saturation measurements in infants <30 weeks gestation resuscitated with air or 100% oxygen. Perinatal Society of Australia and New Zealand, 12th Annual Congress, Gold Coast

Dhulia A, Crossman R, Stewart M, Kamlin O, Davis PG, Dawson JA, Tingay D, Morley CJ. Effects on oxygen saturations. Perinatal Society of Australia and New Zealand, 12th Annual Congress, Gold Coast

Dhulia A. Air transport of ex-premature infants: effect on oxygen saturations. Perinatal Society of Australia and New Zealand, 12th Annual Congress, Gold Coast

Do environmental exposures affect semen quality? Fertility Society of Australia Annual Scientific Meeting, Brisbane

East C. Poster & Session Chairs. Perinatal Society of Australia and New Zealand, 12th Annual Congress, Gold Coast

Edgar D. Evaluation of metabolomic profiling as a tool for embryo selection in single embryo transfer (SET). Fertility Society of Australia Annual Scientific Meeting, Brisbane

Edgar D. Is the proportion of mononucleated blastomeres in human 4 cell embryos an independent predictor of implantation potential? Fertility Society of Australia Annual Scientific Meeting, Brisbane

Edgar D. Significantly increased cryosurvival of cleavage stage embryos dehydrated in an elevated concentration of sucrose. Fertility Society of Australia Annual Scientific Meeting, Brisbane

Forster D, McEgan K, Opie G, Moorhead A, McNamara C, Walker S, Amir L, Ford R, Boyce D. Diabetes & antenatal milk expressing (DAME): a proposed RCT. Page 12. IMPACT Network meeting, Gold Coast

Forster D, McLachlan H, Yelland J, Rayner J, Gold L, Farrell T, Lumley J, Rayner S. An individualised, flexible approach to postnatal care: a pilot project to inform the development of a randomised controlled trial. International Confederation of Midwives, 28th Triennial Congress, Glasgow, Scotland

Gluschenko K. Evaluation of metabolomic profiling as a tool for embryo selection in single embryo transfer (SET). Fertility Society of Australia Annual Scientific Meeting, Brisbane

Gook D. Comparison of slow freezing and vitrification of human oocytes. Fertility Society of Australia Annual Scientific Meeting, Brisbane

Gook D. Detection of zona pellucida proteins in human fetal ovaries. Fertility Society of Australia Annual Scientific Meeting, Brisbane

Gude N. Society for Reproductive Biology, 39th Annual Scientific Meeting. Melbourne

Hacking D. Vaccines and Immunisation of premature infants 11th National Immunisation Conference, Gold Coast

Hardiman A. Best practice in services for women with unplanned and unwanted pregnancy. Strength in Unity Conference (Australian Association of Social Workers), Sydney

Hussein F, Dawson JA, Davis PG, Morley CJ. Use of PEEP valve with neonatal self-inflating device. Perinatal Society of Australia and New Zealand, 12th Annual Congress, Gold Coast

Jackson J., Jordan B., Thomson Salo, F. "Who's looking at me?" Proposed research of infant observation as a therapeutic tool in work with 'at risk' babies. Australian Association Infant Mental Health conference, 'Angels in the Nursery', Adelaide

Jerustin K. Significantly increased cryosurvival of cleavage stage embryos dehydrated in an elevated concentration of sucrose. Fertility Society of Australia Annual Scientific Meeting, Brisbane

Ledder O, Owen L, Kamlin O, Morley CJ, Davis PG. Does the cannulaide nasal hydrocolloid protection device improve NCPAP delivery? Perinatal Society of Australia and New Zealand, 12th Annual Congress, Gold Coast

Liu DY. Activation of PKA and PKC pathways enhances sperm-zona pellucida binding (SZPB) capacity in infertile men with defective SZPB.

Makrides M, Gibson RA, Collins CT, McPhee AJ, Ryan P, Davis PG, Doyle LW, Simmer K, French N, Morris S, Colditz P, Wilson K, Best K. Does high dose DHA improve neurodevelopment of preterm infants? - DINO Trial Outcomes. Perinatal Society of Australia and New Zealand, 12th Annual Congress, Gold Coast

Martic M. Supernumerary ring chromosome (SRC) 1 in sperm of a man with primary infertility – indication for preimplantation genetic diagnosis. Fertility Society of Australia Annual Scientific Meeting, Brisbane

McLachlan H, Forster D, Collins R, Hegarty K, Gunn J, Rayner J, Yelland J, Love L, Cass M, Kelly J. Supporting women after childbirth: enhancing the knowledge and skills of midwives to identify and support women with psychosocial issues during the postnatal period. Perinatal Society of Australia and New Zealand, 12th Annual Congress, Gold Coast

McLachlan H, Forster D, Collins R, Hegarty K, Gunn J, Rayner J, Yelland J, Love L, Cass M, Kelly J. Supporting women after childbirth: enhancing the knowledge and skills of midwives to identify and support women with psychosocial issues during the postnatal period. International Confederation of Midwives, 28th Triennial Congress, Glasgow, Scotland

Mills BA, Davis PG, Clucas LM, Donath SM, Doyle LW. Compliance with pulse oximetry alarm limits: Effects of a randomised controlled trial of oxygen targeting (BOOST II). Perinatal Society of Australia and New Zealand, 12th Annual Congress, Gold Coast

Murthi P. Departmental seminar. Department of Paediatrics, MCRI

Newton M, Albers L, Carr C, Forster D, McDonald S, Mazzarino M, Wagstaffe A, Wills G. WEBS: Weighing up the Evidence in Birth Suite: Exploring the depth of the evidence-practice gap in vaginal examinations and amniotomy in labour. International Confederation of Midwives, 28th Triennial Congress, Glasgow, Scotland

O'Connell LAF, Kamlin COF, Davis PG, Morley CJ. Premedications for neonatal intubation: Current thoughts. Perinatal Society of Australia and New Zealand, 12th Annual Congress, Gold Coast

Oke K. The psychosocial and epidemiological research in reproduction (PEER) group – The value in utilizing a multicentre and multidisciplinary approach to infertility research. Fertility Society of Australia Annual Scientific Meeting, Brisbane

Phillips S. Patient experiences in advertising for an egg donor. Fertility Society of Australia Annual Scientific Meeting, Brisbane

Quinn M. Women's Health Update and Education. Melbourne

Rayner J, Walsh R, McLachlan H, Forster D. Why do women combine the use of assisted reproductive technologies (ART) and complementary and alternative medicines (CAM) to enhance fertility? Perinatal Society of Australia and New Zealand, 12th Annual Congress, Gold Coast

Savage T, Forster D, McLachlan H, Rayner J. A review of postnatal documentation in Victoria. Perinatal Society of Australia and New Zealand, 12th Annual Congress, Gold Coast

Schmidt B, Roberts R, Davis PG, Doyle LW, Barrington KJ, Ohlsson A, Solimano A, Win W for the Caffeine for Apnea of Prematurity Trial Group. Long-term effects of caffeine therapy for apnoea of prematurity. Perinatal Society of Australia and New Zealand, 12th Annual Congress, Gold Coast

Schmolzer GM, Te Pas AB, Dawson JA, Kamlin COF, Davis PG, Morley CJ. Use of a respiratory function monitor during stabilisation of neonates in the delivery room. Perinatal Society of Australia and New Zealand 12th Annual Congress, Gold Coast

Stern C. Restoration of ovarian function and transvaginal retrieval of a mature oocyte following heterotopic and orthotopic ovarian tissue grafting in a patient with high dose chemo/radiotherapy induced premenstrual ovarian failure: A first Australia case report. Fertility Society of Australia Annual Scientific Meeting, Brisbane

Tabrizi S. Lymphogranuloma venereum in New Zealand. 25th NRL Workshop on Serology. Melbourne

Tabrizi S. Presentation: The WHINURS (Women, Human papillomavirus genotype prevalence, Indigenous, Non-indigenous, Urban, Rural Study) study: a population based measure of type-specific human papillomavirus (HPV) infection in Australian women pre-HPV vaccine rollout. Public Health Association of Australia 11th Immunisation conference. Surfers Paradise

Tabrizi S. The epidemiology of type-specific human papillomavirus infection of Australian women: analysis of data from the WHINURS study. Public Health Association of Australia 11th Immunisation conference. Surfers Paradise

Tang P. The Melbourne IVF fertility preservation service database. Fertility Society of Australia Annual Scientific Meeting, Brisbane

Te Pas A, Kamlin COF, Davis PG, Dawson JA, O'Connell CPF, Sokol J, Stewart M, Morley CJ. Manual ventilation of infants with congenital diaphragmatic hernia in the delivery room: Observations on delivered tidal volumes and patterns of breathing. Perinatal Society of Australia and New Zealand, 12th Annual Congress, Gold Coast

Te Pas AB, Davis PG, Kamlin COF, Dawson JA, O'Donnell CPF, Morley CJ. Spontaneous breathing patterns of preterm infants treated with continuous positive airway pressure at birth. Perinatal Society of Australia and New Zealand, 12th Annual Congress, Gold Coast

Te Pas AB, Davis PG, Wong C, Kamlin COF, Dawson JA, Morley CJ. Term infants at birth mostly break expiration by crying. Perinatal Society of Australia and New Zealand, 12th Annual Congress, Gold Coast

Watson LF, King JF, Lumley J, Forster D, Kealy M.
Classifying very preterm births according
to a modified version of the PSANZ perinatal death
classification. Perinatal Society of Australia and
New Zealand, 12th Annual Congress, Gold Coast

Wheeler KI, Kamlin COF, Davis PG, Morley CJ.
Surfactant administration during assist
control-volume guarantee (AC-VG) ventilation:
What happens to flow, tidal volume and inflating
pressures? Perinatal Society of Australia and New
Zealand, 12th Annual Congress, Gold Coast

Williams L. An evaluation of weight loss intervention
for obese women trying to conceive. Fertility
Society of Australia Annual Scientific Meeting,
Brisbane





the women's
the royal women's hospital
victoria