



THE UNIVERSITY
of ADELAIDE



Robinson Research Institute

Annual Report 2016


seek LIGHT

 **Robinson
Research Institute**
Healthy children for life.

Contents

Who We Are	1
RRI at a Glance	2
Our Discoveries Impact	3
Message from the Acting Deputy Vice-Chancellor (Research) & Message from the Chair	4
Message from the Director	5
Research Priorities	6
Funding Highlights	28
Fellowships and Awards	30
Collaboration	32
Financials	37
Institute Engagement	38
Media Impact	40
Research Groups	41
Investing in our Members	66
Advisory Board	70
Early and Mid-Career Researcher Council	70
Executive Committee	71
Member List	72
Publications	74
Support us	93





Our vision is to achieve life-time health for all children and families, through research excellence.

Our mission is to deliver world-class advances in knowledge of human reproduction, pregnancy and child health, and to inform clinical care, policy and practice that will improve health across generations and global communities.

Who we are

The Robinson Research Institute is a collective of internationally renowned researchers in human reproduction, pregnancy and child health at the University of Adelaide.

We focus on the early stages of life to improve the health and well-being of children and families over the life course and across generations, in Australia and around the world.

We seek to enable a healthy start through fertility choices and mindful conception, nurturing the baby during pregnancy and birth, strengthening the brain and body in early life, and advancing child and adolescent health to treat and prevent disease.

RRI at a glance



\$24.5m+
competitive funding



48
Research Leaders



\$11,615+
donations



380+
Members



4
Research Themes



10
Research Priorities



30
Honours Students



85
PhD Students



6
New Patents Filed



5
Embedded in 5 SA Hospitals



5
Top ERA Ranking of 5 for all 3 rounds



120+
Conference Presentations (56 international)



20+
Media Releases



38,400+
citations by Research Leaders in 2016 (Google Scholar)



560+ publications

IF 15+



IF 10+



IF 6+



Our discoveries impact on:

Fertility & Conception

- > Breast health
- > Contraception
- > Congenital abnormalities
- > Embryo development
- > Endocrine disorders
- > Environmental reproductive toxins
- > Endometriosis
- > Female and male reproductive health
- > Female fertility
- > Gamete development & quality
- > Genome editing
- > Immune disorders
- > Implantation failure
- > Infertility
- > IVF
- > Male fertility
- > Metabolic disease
- > Miscarriage
- > Mitochondrial disease
- > Ovarian cancer
- > Pelvic pain
- > Polycystic ovary syndrome
- > Preconception care and planning
- > Puberty
- > Reproductive cancers
- > Sexually transmitted infection

Pregnancy & Birth

- > Gestational diabetes
- > Intrauterine growth restriction
- > Labour induction
- > Maternal overweight and obesity
- > Multiple pregnancies
- > Neonatal medicine
- > Obstetric medicine
- > Placental development and dysfunction
- > Postnatal depression
- > Preeclampsia
- > Pregnancy health & care
- > Preterm birth
- > Stillbirth
- > Vaccination in pregnancy
- > Zika virus

Early Origins of Health

- > Asthma & Allergy
- > Autism
- > Autoimmune disorders
- > Cancer
- > Cardiovascular disease
- > Health equity
- > Epigenetics
- > Neurodevelopment
- > Obesity
- > Transmission of health across generations
- > Type 1 and Type 2 diabetes

Child & Adolescent Health

- > Cerebral palsy
- > Circadian rhythms
- > Cystic fibrosis
- > Diabetes (Type 1 and Type 2)
- > Educational achievement
- > Epilepsy
- > Influenza
- > Intellectual disability
- > Juvenile arthritis
- > Meningococcal disease
- > Mental health
- > Organ transplantation
- > Pertussis (whooping cough)
- > Sleep disorders
- > Stem cells
- > Vaccine safety

Message from the Acting Deputy Vice-Chancellor (Research)



In both my current and previous roles at the University, I have been fortunate to be actively involved with the Robinson Research Institute, and to see first-hand how the

Institute's research advances are benefiting society and improving lives.

With members producing an outstanding 500+ publications in 2016, many important research discoveries are emerging.

Notable advances in 2016 include a new understanding of how shiftwork affects fertility; evidence that risk of stillbirth is twice as high for disadvantaged women; identifying that an extra 1,000 steps a day benefits children with type 1 diabetes for life-long health; and a new technique for IVF embryo selection which improves conception rates and healthy pregnancy outcomes.

The Institute continues to seek ways to improve life-long health for children and families by focusing on the earliest stages of life. Members are increasingly building the evidence for links between early-life events and chronic disease, and now understand that investment in a healthy start is vital for producing healthy, resilient communities.

I am impressed not only by the Institute's research discoveries, but also the willingness of members to share their findings with our community through media and public seminars. This communication is necessary to raise awareness, influence policy and practice, and educate people on choices and changes they can make to improve their own health, and the health of their families.

I am confident in the ability of the RRI to make significant improvements for the health of generations to come.

Professor Julie Owens

Message from the Chair



Competition for scarce research funds in Australia is at an all-time high. As such, strategic directional change is required to ensure organisations and members continue

to thrive, and I am optimistic about the future of the Robinson Research Institute as I see necessary changes being put in place.

In 2016, the Institute joined the Association of Australian Medical Research Institutes whose mission is to advocate for medical research, and is in frequent communication with the government and opposition ministers to keep research at the forefront of politicians' minds. Being a member of this important body connects us into a group of like-minded organisations who are working together to make real change and ensure sustainability for the future of medical research in Australia.

In addition, members are increasingly forming new collaborations with non-traditional partners to tackle big research questions together. It is a big shift from how research has previously been undertaken, but I can see innovative approaches and partnerships being created and I look forward to seeing what the future holds for these partnerships.

In particular, members are looking towards health consumers for input into tackling research questions, which is hugely important for not only relevance to the community, but for translating research findings into improved health for South Australians – and people around the globe.

I congratulate the Director, Prof Sarah Robertson on her election as a Fellow of the Australian Academy of Science recognising her reproductive immunology research. This is an outstanding achievement, and one that really demonstrates the immense contribution to science that Sarah has made.

As always, I want to sincerely thank the RRI Advisory Board Members for their commitment, contribution and insight provided to the Institute during 2016. We are fortunate to have such a competent Advisory Board with the breadth of expertise to provide exceptional support to the RRI leadership team during challenging times.

I look forward to continuing to Chair the Advisory Board into 2017 and beyond, and congratulate RRI members on another outstanding year.

Professor Jock Findlay AO

Message from the Director

The Robinson Research Institute has had another strong year. I am proud of the progress of our members towards understanding the early life origins of health, and putting research to work for the benefit of current and future generations.

Our research delivers new fundamental insight and advances solutions for major health conditions ranging from infertility, preterm birth and preeclampsia, through to debilitating childhood conditions including cystic fibrosis, diabetes, asthma and infectious disease.

It is clear that the impediments to health, equality and quality of life for children and families everywhere require collaborative, multidisciplinary research effort if solutions are to be found. As such, in 2016 we have intentionally turned our attention to focus on building research collaborations and partnerships.

We initiated new connections and built on existing partnerships with a variety of stakeholders. The Engaging Opportunities Program was established to support members in developing new research partnerships. One notable example is with the Birthing Kit Foundation of Australia - together we are reviewing the effectiveness of birthing kits on maternal and newborn outcomes with the aim of reducing maternal and newborn mortality and morbidity in developing nations. Other new relationships are with Ferring Pharmaceuticals to develop treatments for gestational disorders, and with SHine SA to understand determinants of reproductive health in young South Australians.

A particular highlight of 2016 has been partnering with Glaxo Smith Kline on the *B Part of It* study, led by Prof Helen Marshall. This world-first study will offer vaccinations to almost 60,000 South Australian high school students to protect against the potentially deadly Meningococcal B bacteria. Results from this study will establish whether, when a significant proportion of a population is immunised against Meningococcal B, herd immunity is provided for those who are not immune. This \$11m study is a collaboration partnership with SA Health, local state councils and schools. As the largest



Meningococcal B vaccine herd immunity study ever conducted, the results will inform vaccine policy around the world.

We are pleased to have joined two organisations in 2016; The Association of the Australian Medical Research Institutes - the peak body for medical research, who actively engage with government, the opposition and sector leaders to advocate for the medical research sector; and the Medical Research Commercialisation Fund - an innovative venture capital collaboration that invests in early stage development and commercialisation opportunities.

We continue to be committed to supporting our early and mid-career researchers, understanding that developing early and mid-career researchers is critically important to sustain and build on the work of the Institute. To facilitate this we established the Early and Mid-Career Researcher Council, which seeks to link the Institute's EMCRs with the Executive Committee and provides a platform to advise and influence the RRI's operations.

As always, I am grateful for the University's continued encouragement and confidence

in the value of the Institute's research and its significance for the University's impact.

We are well-supported by the Institute's professional staff, to whom I am grateful for their dedication and professionalism. I also thank the Advisory Board, Executive and EMCR Council for their time and commitment to oversight and leadership of the Institute. Particularly, I thank our Advisory Board Chair, Professor Jock Findlay, for his invaluable support and guidance, as well as the Institute's Deputy Directors, Professors Helen Marshall, Claire Roberts and Ray Rodgers.

I'm looking forward to an exciting year ahead, with many of our members moving into the new Adelaide Health and Medical Sciences building in the West End precinct in mid-2017. This fantastic new environment adjacent to SAHMRI and the new Adelaide Hospital, with its world-class research infrastructure, will further facilitate opportunities for partnership, collaboration and making research advances that matter.

Professor Sarah Robertson

We seek to prevent and alleviate infertility

Infertility is common; 1 in 6 couples are diagnosed as clinically infertile, and demand on IVF services is growing, costing Australians more than \$360 million per year.

To address infertility the Robinson Research Institute is:

- > Advancing knowledge of the physiological processes of gamete production, conception and early embryo development
- > Uncovering how diet, infection and lifestyle choices alter fertility and the health of the baby
- > Understanding how metabolic conditions such as obesity, diabetes and PCOS cause infertility and alter fetal growth, and developing interventions
- > Improving the process of IVF to make it safer, less invasive and more cost effective
- > Developing new infertility treatments to expand options and to improve success
- > Building tools to educate the community on the importance of early planning for conception and parenthood

Translational Impact

Your Fertility

Your Fertility is a national public education program that works to increase community understanding of modifiable factors that affect fertility as well as chances of conceiving a healthy baby. The program is targeted towards women and men of reproductive age in Australia. By sharing the latest scientific and medical information, *Your Fertility* empowers people to make informed and timely decisions regarding their reproductive health.

The RRI is a proud partner of the Fertility Coalition led by the Victorian Assisted Reproductive Treatment Authority that includes the Jean Hailes Research Unit and Andrology Australia.

In 2016 the coalition launched the *Your Fertility Potential* webtool, which provides tailored guidance to users based on input of personal factors including age, BMI, smoking and alcohol consumption, with the intent of improving conception success. We will continue to develop the webtool over 2017 and beyond.

Endometriosis drug development

A/Prof Louise Hull is the principle investigator for a clinical trial assessing a new pharmaceutical drug for endometriosis in South Australia. This newly formulated GnRH antagonist (Elagolix) is for oral use, meaning it is easy to administer daily over long periods of time, compared to the currently available injectable GnRH antagonists.

Adelaide is one of the sites in this multinational, randomised controlled clinical trial and the Robinson Research Institute has partnered with the Pain and Anaesthesia Research Clinic to conduct this trial in association with AbbVie

IVF Vet Solutions funds new research into IVM

Established by A/Prof Jeremy Thompson and A/Prof Robert Gilchrist (UNSW), IVF Vet Solutions provides mouse embryo assays for screening toxicity that may be present in media and disposables used in human IVF. The facility provides consultancy and training for complete bovine IVP and vitrification, to boost productivity in the cattle industry. Income is fed back into world-leading research into *in vitro* maturation of oocytes, notably testing new agents in Phase 1 clinical trials, in conjunction with clinical colleagues in Brussels.

BlastGen

A/Prof Louise Hull led the Australian BlastGen clinical trial for IVF patients with previous miscarriage or poor IVF success. BlastGen is the next phase of the successful EmbryoGen product developed in Adelaide in partnership with Origio A/S (Denmark), and is formulated to support blastocyst stage embryo transfer. Both BlastGen and EmbryoGen contain the signalling molecule GM-CSF, which protects the embryo from stress, making it stronger and more robust following conception. In this new IVF treatment, the embryo is cultured in medium that more closely mimics the natural uterine environment, leading to a higher pregnancy success rate. Data on efficacy will be available in 2017.

Tackling PCOS

In collaboration with Prof Helena Teede and colleagues at Monash University, RRI members are working towards improving health and fertility outcomes for women with PCOS. Ultimately we seek to understand the underlying causal mechanisms of this pervasive condition. Our work builds on success in developing clinical guidelines for the evaluation, management and health care needs of polycystic ovary syndrome, through the NHMRC Centre for Research Excellence.

The guidelines have been distributed to every general practitioner and specialist in Australia. These guidelines are being implemented internationally, to significantly impact the health and treatment of millions of women around the world living with PCOS.

Bed, Birth and Beyond Conference

The RRI teamed up with Fertility SA to co-host the inaugural *Bed, Birth and Beyond* workshop, for South Australian General Practitioners. This full day event updated attendees on the latest knowledge about fertility and conception health, with presenters from both the RRI and Fertility SA providing information with the intention of building reproductive health capacity amongst GPs and other primary care providers.

The Embryo Selfie

Collaborations between the Robinson Research Institute and the ARC-funded Centre for Nanoscale Biophotonics are opening a world of possibilities in sensing and imaging. Bringing together physicists, chemists, biologists, engineers and an array of other expertise is allowing technologies never before seen in the biology space to be applied to the periconception period. One such technology is a statistical modelling and image analysis technique, coined The Embryo Selfie.

One of the greatest challenges within current IVF clinics is the non-invasive selection of the best embryo. There is a pressing need for cheap, rapid, non-invasive diagnostics, to improve success rates.

This technology is allowing us to distinguish between embryos, where we've not been able to in the past, and the collaboration has recently entered into a research partnership

with Repromed, allowing us to assess the capabilities of The Embryo Selfie in humans. This collaboration involves Dr Hannah Brown, A/Prof Jeremy Thompson, Dr Mel Sutton-McDowall, Dr Deirdre Zander-Fox, Tiffany Tan and Tahlee Stevenson.

OnPrime

Two RRI teams were successful in being accepted into the OnPrime program, seeking to assist research teams in validating their research and developing real world applications for discoveries.

At home fertility screening kit

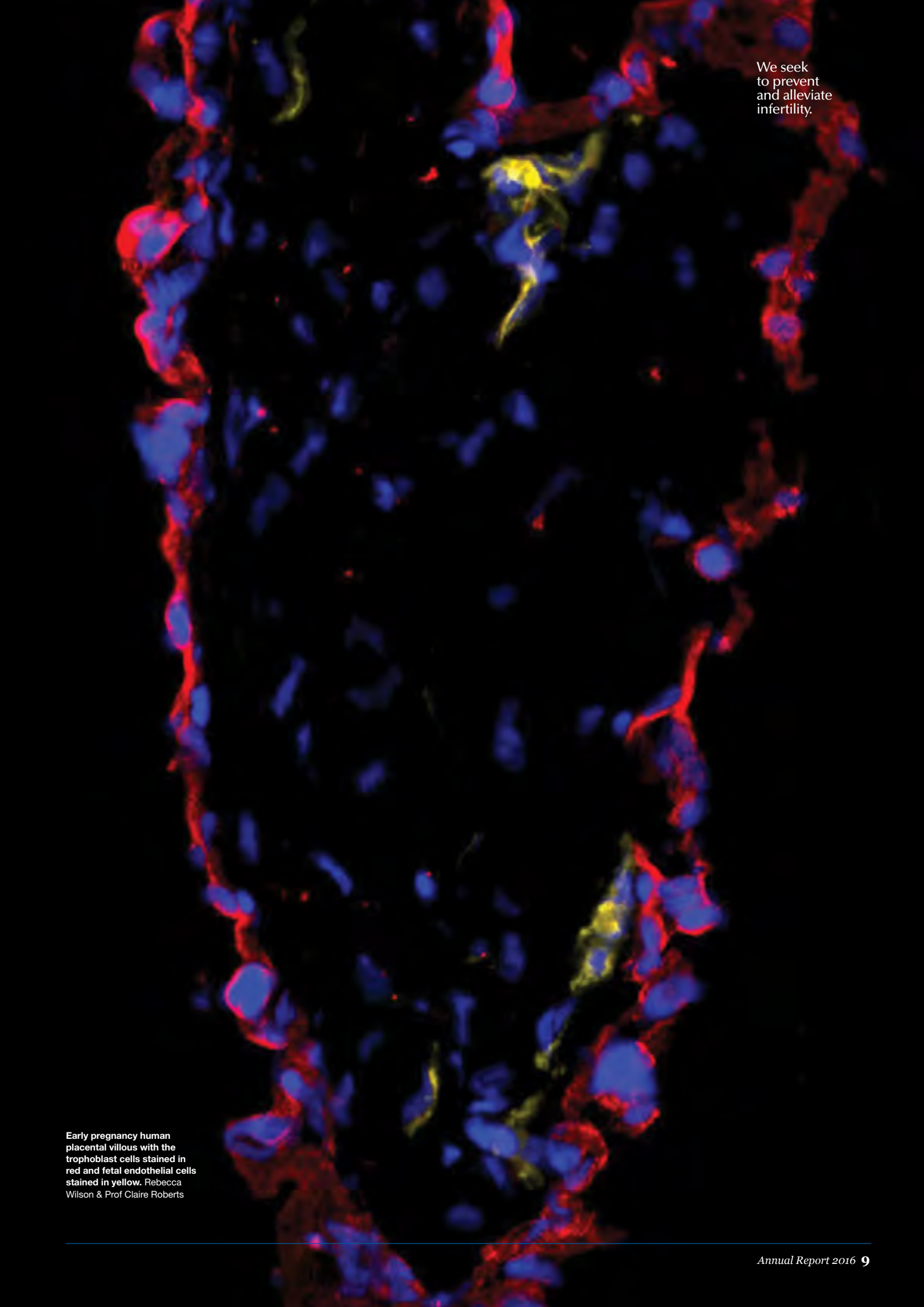
A/Prof Jeremy Thompson, Prof Ray Rodgers, Dr Nicole McPherson and Marcus Goddard seek to develop an at home fertility screening kit, that analyses sperm count and motility utilising a smart phone.

Making better babies using light

Dr Melanie McDowall and colleagues at the CNBP are exploring completely new ways to predict embryo health using computational physics, exploiting the properties of light. Akin to the “whispering gallery” of St. Pauls Cathedral, the team is investigating how light “bounces” within a spherical object, like an egg and embryo. It’s an approach that adds to the “Embryo Selfie” project.

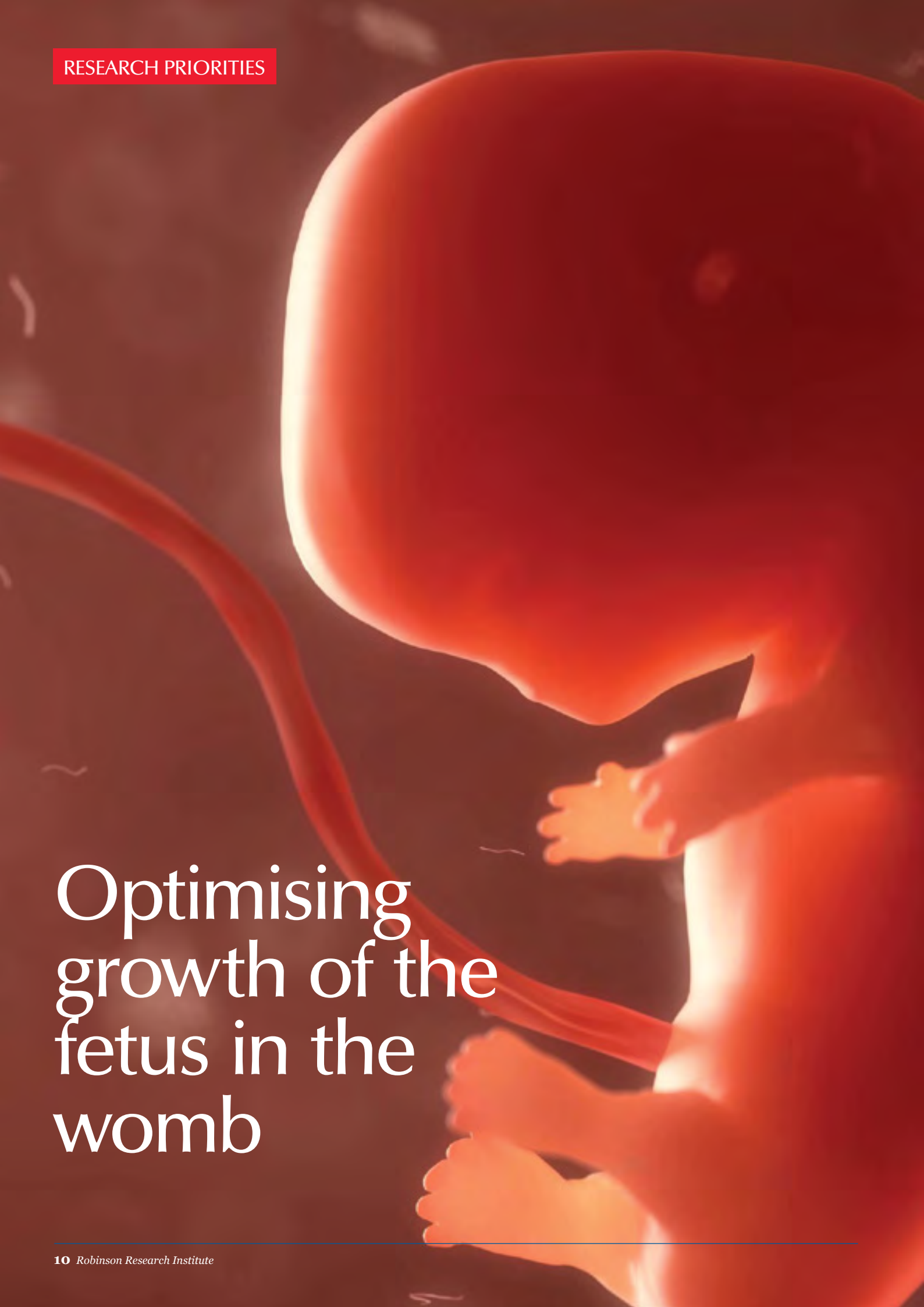
Advances in 2016

- > We discovered that when one twin dies in early gestation, the surviving twin has an increased risk of major congenital malformations. Prof Michael Davies’ discovery provides additional evidence for increasing the adoption of single embryo transfer as best practice worldwide.
- > We completed a randomised controlled trial comparing BlastGen growth factor media with standard media. We anticipate that BlastGen will provide a new option for women with previous miscarriage, poor embryo quality or recurrent implantation failure.
- > We showed that routine hysteroscopy does not improve livebirth rates in infertile women with a normal transvaginal ultrasound of the uterine cavity scheduled for a first IVF treatment. Prof Ben Mol’s findings demonstrate that women with a normal transvaginal ultrasound should not be offered routine hysteroscopy.
- > Components for a smart-phone sperm motility analyser are being developed in conjunction with RMIT researchers. Professors Jeremy Thompson, Sarah Robertson and colleagues hope this ‘At Home’ reproductive assessment test will motivate couples struggling to conceive to investigate their fertility potential using this readily accessible, non-threatening tool.
- > We are examining expression of genes in adult ovaries and fetal ovaries to identify gene pathways underlying PCOS development. In particular, Prof Ray Rodgers and colleagues found four PCOS-related genes to be highly expressed early in the developing ovary, indicating that PCOS may be entrained before birth.
- > We showed that administering human growth hormone for poor responders of IVF delivered no benefit. Prof Rob Norman hopes his findings will put an end to clinics treating with this expensive and unnecessary drug.
- > We completed pre-clinical experiments optimising drugs and nutraceuticals for improving oocyte quality in obese females. A/Prof Rebecca Robker and colleagues demonstrated that treating the oocyte protects the integrity of mitochondrial inheritance in the embryo, and they are planning clinical in vitro testing in human oocytes.
- > We described fluctuations over time in immune-regulatory TGFB factors within the seminal fluid of men. Prof Sarah Robertson and Dr David Sharkey believe that as TGFB regulates immune tolerance for pregnancy in the female partner, this may contribute to unexplained variations in the fertility status of men, that are independent of sperm parameters.
- > We found that species with a relatively large testes mass produce far more uniform and streamlined spermatozoa, than those with small relative testes. Prof Bill Breed’s findings show some similarities to those of the human species providing new insight and suggesting new options for therapeutic targets.
- > We localised selenium in the ovary using the Australian Synchrotron. Prof Ray Rodgers and colleagues are now testing the hypothesis that follicle micronutrient availability and utility changes with aging, leading to a deterioration of eggs.
- > We demonstrated that a 6-month structured intervention program to facilitate weight loss preceding infertility treatment, did not improve rates of vaginal birth of healthy singletons at term 24 months after follow-up. Prof Ben Mol’s findings were the result of a randomised controlled trial.



We seek
to prevent
and alleviate
infertility.

Early pregnancy human
placental villous with the
trophoblast cells stained in
red and fetal endothelial cells
stained in yellow. Rebecca
Wilson & Prof Claire Roberts



Optimising growth of the fetus in the womb

An average Australian baby weighs 3.4kg with over 6% of babies less than 2.5kg and 12% more than 4kg. Both small and large babies are at greater risk of health complications leading to childhood disability, adult onset diseases and early death.

To understand how and why some babies are born too small or too large, and to optimise birth weight, the Robinson Research Institute is:

- > Investigating how birth weight is influenced by the interaction between genetic and epigenetic factors and the environment
- > Developing effective interventions to ensure babies are born at a healthy weight
- > Educating the community about the risk factors associated with unhealthy birth weight: diet, alcohol, drug usage, smoking, mental health problems, diabetes, BMI and socioeconomic status and disadvantage
- > Understanding why Indigenous women are at increased risk of delivering an unhealthy birth weight infant, and working with these women to improve outcomes for both mothers and babies

Our work positively impacts the community through the translation of research findings into clinical practice; for example, findings from the LIMIT randomised trial and the impact of positive changes to women's diet and physical activity during pregnancy have been incorporated into local state-wide clinical practice guidelines, and are informing recommendations in the United Kingdom and Europe.

Translational Impact

Prediction to prevent pregnancy complications

Approximately 25% of women in their first on-going pregnancy in Australia are affected by one or more of the four major complications: preeclampsia, preterm birth, intrauterine growth restriction and gestational diabetes. Health issues for the resulting babies range from childhood obesity, mild learning and behavioural problems, to severe disabilities such as cerebral palsy, intellectual handicap, blindness or even death.

Prof Claire Roberts is seeking to prevent the onset of these complications and has developed the world's first pregnancy screening test that can predict a woman's risk. Women at high risk can then be offered early interventions. Testing and validation of the algorithms in a new pregnancy cohort is underway. Claire has garnered the support of a commercial partner and hopes this screening test will be implemented in antenatal clinics in the next few years.

Cochrane Pregnancy and Childbirth Group

Cochrane Pregnancy and Childbirth prepares and maintains systematic reviews of interventions that relate to pregnancy, childbirth, and up to 30 days following childbirth, as well as lactation. They maintain a comprehensive database of all relevant randomised trials. Prof Caroline Crowther and A/Prof Philippa Middleton co-ordinate the Australian and New Zealand Satellite for Cochrane Pregnancy and Childbirth, and during 2016 with Emily Shepherd as the Cochrane Research Fellow, supported review author teams to prepare 11 new protocols, 13 new reviews and 16 updated reviews.

Advances in 2016

> We completed the Australian recruitment for the international Folic Acid Clinical Trial study, assessing the benefits and harms of taking folic acid into the third trimester for the prevention of preeclampsia. Prof Bill Hague and colleagues are planning a long-term follow up study to assess the potential impact of folate on fetal genome methylation, and therefore on growth and development of offspring.

- > We found that women whose babies are conceived in winter are more likely to develop gestational diabetes, increasing a range of risk factors for both child and mother. Dr Petra Verburg's findings were part of a study investigating more than 60,000 births in South Australia over a five year period.
- > We demonstrated sex-specific polar over-dominance in imprinted gene expression of hybrids. Prof Stefan Hiendleder and Drs Consuelo Estralla, Mani Samami and Ali Javadmanesh hope their findings will be used in selection for heterosis retention in hybrid animals as it explains specific growth related heterosis effects in mammals.
- > We commenced a large animal trial to investigate the impact of simulated shift work exposure during pregnancy on maternal, fetal and progeny health. Initial results from Prof David Kennaway and Drs Tamara Varcoe and Kathy Gatford's findings demonstrate maternal shift work exposure disrupts patterns of behaviour, melatonin secretion and peripheral clock gene expression, leading to altered metabolic control. Studies are underway to investigate the impact of this exposure in utero on the progeny through to adulthood.

> We demonstrated in a randomised controlled trial that in the diagnosis of gestational diabetes in a Chinese population, a single fasting plasma glucose measurement, can predict whether women are at increased risk of delivering a large for gestational age baby. Prof Ben Mol and colleagues' findings will help refine interventions to limit growth size.

Preventing early labour and improving outcomes for babies born prematurely



1 in 10 babies are born preterm at less than 37 weeks gestation. This carries immediate and life-long risks to the infant's health and survival as the brain and organs are not fully developed.

To improve outcomes for babies born preterm and to ultimately predict and prevent premature birth, the Robinson Research Institute is:

- > Uncovering how factors such as infection, stress and immune responses interact in some women to trigger early labour and birth
- > Developing predictive tests to identify early in pregnancy which women are at increased risk for preterm birth
- > Identifying and evaluating preventative drugs and treatments for mothers assessed to be at risk
- > Developing treatments to improve short and long-term health outcomes for babies born preterm

Translational Impact

Neonatal and Paediatric Guidelines

Associate Prof Michael Stark and Dr Amy Keir were contributing authors of the *Patient Blood Management Guidelines: Module 6 Neonatal and Paediatrics*.

The final in a series of six evidence-based guidelines, this module assists and guides health-care professionals in making clinical decisions about blood management in neonatal and paediatric patients, and includes guidance on dosing, assessment and the optimisation of various products and situations in the neonatal and paediatric population. The module's recommendations have been approved by the National Health and Medical Research Council.

Advances in 2016

- > We showed that a small molecule inhibitor of Toll-like receptor-4 called (+)-naloxone is effective in preventing infection-induced preterm birth in mice. Prof Sarah Robertson and her team now seek to evaluate (+)-naloxone in human tissues and progress the work to clinical studies.
- > We found that late preterm birth from mothers who were treated with betamethasone, did not impair glucose metabolism or insulin sensitivity in adult progeny. Dr Kathy Gatford's findings add to variable results of other pre-clinical studies to suggest that effects of prenatal corticosteroids and preterm birth vary between drugs and may depend on when the baby is delivered, highlighting the need for direct comparisons of the corticosteroids in common clinical use.
- > We recruited neonates who require blood transfusions to take part in a randomised controlled trial to compare the efficacy of a new washed blood product. Dr Nicolette Hodyl's study incorporates basic science and clinical data to increase scientific understanding and facilitate a more rapid clinical translation of findings.
- > Ben Mol working with the 4P trial group demonstrated that daily administration of vaginal natural progesterone did not reduce risk of preterm birth or neonatal adverse outcome in women with preterm labour.
- > We contributed to a study investigating how microbial-derived immune modulating agents can protect mice from preterm birth and fetal growth restriction. Prof Sarah Robertson, A/Prof Deborah Strickland and colleagues' findings may offer a novel approach to boosting the immune response and ensuring protection from inflammatory challenges that lead to preterm birth.
- > We showed a direct link between continued marijuana use during pregnancy and preterm delivery. Prof Claire Robert's and collaborators were the first to show this as part of their international SCOPE study.
- > We showed that allosteric peptide antagonists of interleukin-1 signalling protect mice from preterm birth and neonatal loss. Prof Sarah Robertson and her team working with collaborators at the University of Montreal and University of Alberta are seeking to develop this finding into new drug treatments for women at risk of delivering preterm.

Maximising brain developmental potential

The development of the brain and nervous system is fundamental to how we function throughout life. Children born preterm often experience problems in neurodevelopment, which impacts their ability to contribute to society and impacts their career, earning potential, where and how they live, and physical and psychological health. Others have genetic conditions that impair normal intellectual function.

To further our limited understanding of genetic and environmental drivers of neurodevelopment, the Robinson Research Institute is:

- > Investigating the physiology that is responsible for changes in neurodevelopment for preterm babies, and determining whether changes are due to being born early, or growth restriction during pregnancy
- > Understanding how adverse environments during pregnancy and events in early life affect brain development
- > Developing interventions to counter neurodevelopmental changes through improving the strength of neuron connections in the brain and improving environmental learning settings for children
- > Gaining a better understanding of how socioeconomic disadvantage affects cognitive and motor abilities
- > Identifying genetic causes of neurodevelopmental disease

Translational Impact

Chair for the Prevention of Childhood Disability



Prof Jozef Gecz was appointed as the inaugural Chair for the Prevention of Childhood Disability in 2016. Jozef will lead a comprehensive, multi-disciplinary research program in Adelaide

focused on defining the origins and early diagnosis of childhood disability and building Adelaide's research capacity in this area.

Jozef holds a joint appointment as an RRI-SAHMRI Research Leader, and this new position was granted in partnership with the Channel 7 Children's Research Foundation, SAHMRI and the University of Adelaide.

Preterm birth research impact

The research findings from Dr Julia Pitcher's research team demonstrates subtle but significant neurophysiological changes in brain function in adolescents born mildly preterm or early term. These results have contributed notably to the increasing international recognition by clinicians and educational experts that this very large group of children are vulnerable to increased health, educational and behavioural difficulties into

adulthood. For example, her group's findings are informing the current debate regarding the relative risks of elective inductions and caesarian sections prior to 37 weeks gestation for non-medical reasons.

Advances in 2016

- > We've shown through preliminary evidence that exposure to gestational diabetes in utero blunts neuroplasticity during adolescence. Drs Julia Pitcher and Luke Schneider, Jago Van Dam and Prof Bill Hague's findings lead them to believe maternal metformin treatment may provide neuroprotection against the effects of gestational diabetes.
- > We provided preliminary evidence demonstrating there is a short-lasting period of enhanced brain plasticity following stroke. If confirmed, A/Prof Mike Ridding's finding has major implications for stroke rehabilitation.
- > We discovered that 'a non-coding variant in the 5' UTR of DLG3 attenuates protein translation to cause non-syndromic intellectual disability. A family of >130 individuals from Australia, which Prof Jozef Gecz and colleagues have studied for >25 years, has provided one of a few examples of a non-coding mutation, which explains heritable cause of intellectual disability.



Preventing and reversing childhood obesity

Approximately 56% of women, 70% of men and 23% of children are overweight or obese. Children born to overweight or obese parents are at increased risk of obesity throughout life.

To reduce the incidence of obesity and tackle its intergenerational transmission, the Robinson Research Institute is:

- > Developing interventions for pregnant women who are overweight or obese to improve pregnancy health and the health of the baby - through large randomised controlled trials
- > Identifying key dietary, metabolic and other factors in obese mothers that are related to poor health in their children
- > Uncovering why maternal and paternal obesity can each lead to an increased risk of poor metabolic health and obesity in their children
- > Developing tools to match women to the most appropriate and cost-effective form of intervention to limit gestational weight gain, especially in disadvantaged and Indigenous women
- > Developing guidelines and tools for improving clinical care of pregnant women who are overweight or obese

Translational Impact

Obesity in pregnancy

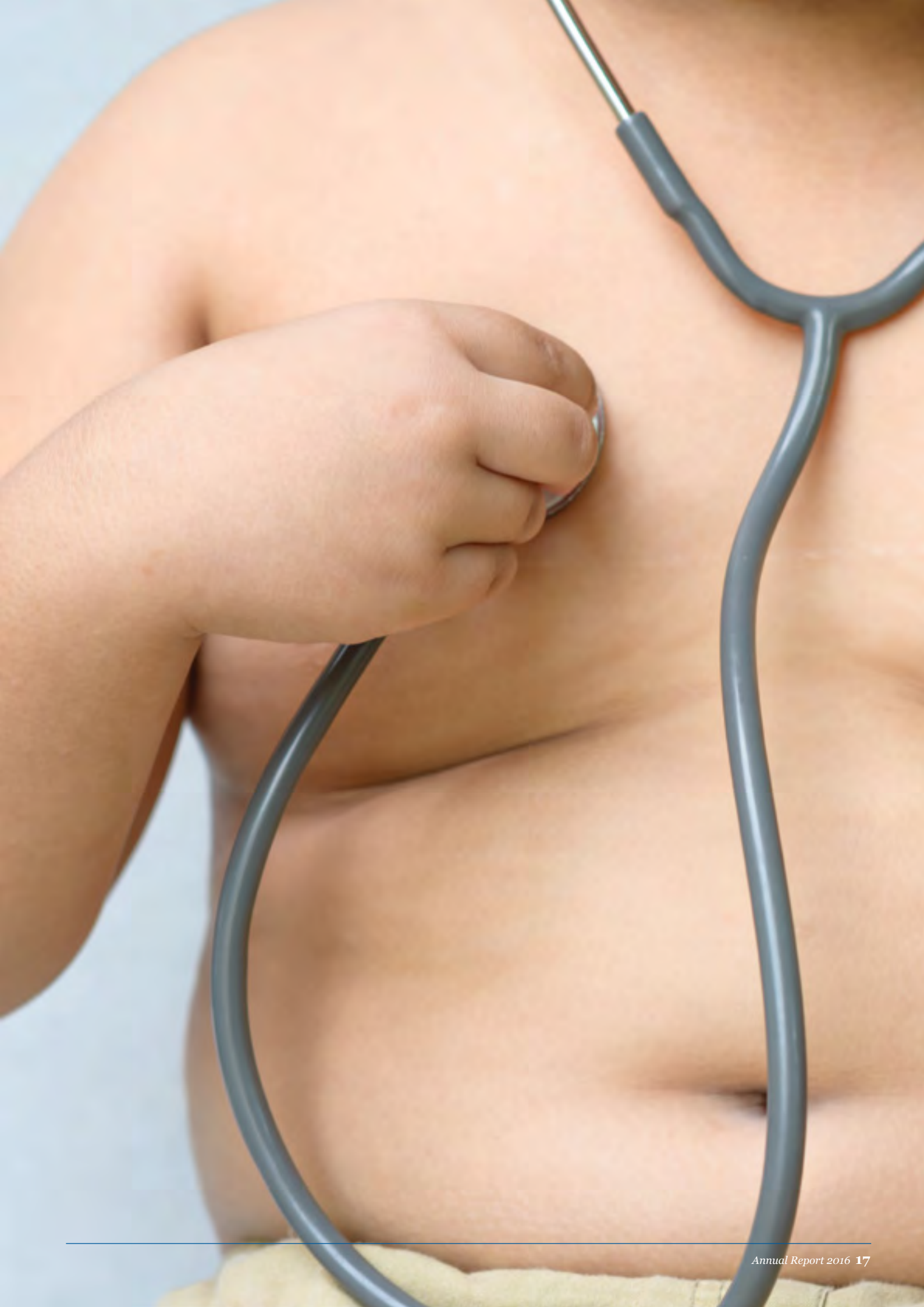
Prof Jodie Dodd led the LIMIT randomised controlled trial seeking to improve outcomes for pregnant women who were overweight or obese at the start of pregnancy. Women who received achievable dietary and lifestyle advice made significant improvements to their diet and physical activity, and their babies were less likely to be born with a birth weight over 4kg.

Jodie demonstrated that the additional cost of providing this one-on-one lifestyle advice was offset by improved outcomes at birth, through reduced healthcare costs for both mothers and their babies, providing an impetus to change current clinical care. Longer term follow up of the 3 to 5 year old children whose mother's participated in the LIMIT Trial has been completed and the findings (to be published in 2017) will continue to inform healthcare, particularly the impact of maternal diet on early childhood health and development.

Advances in 2016

- > We led the first face to face meeting of the early child follow up individual participant data meta analysis collaboration in London for the LIMIT trial. In this meeting hosted by Prof Jodie Dodd, 17 international collaborators gathered to formalise the project which will continue through 2017.
- > We completed an intervention trial in 90 women examining the metabolic benefits of alternate day fasting diets. A/Prof Leonie Heilbronn demonstrated that fasting diets are as effective as calorie restriction in improving metabolic health in the short term.
- > We completed follow up assessments of the 3 to 5-year-old children of the women who participated in the LIMIT randomised trial, assessing diet and lifestyle interventions in pregnant women who were overweight or obese. Prof Jodie Dodd obtained data on 75% of children with data currently being analysed.

- > We showed the importance of not just the mothers' metabolic status, but also the father's, for preventing intergenerational transmission of metabolic dysfunction that underpins childhood weight gain. Prof Michelle Lane and Drs Tod Fullston and Nicole McPherson progressed their work showing how paternal obesity changes the microRNA content in both mice and men, contributing to obesity programming in offspring.



Discovering causes and cures for reproductive cancers

Breast and prostate cancers are the most prevalent forms of cancer with 1 in 9 Australians diagnosed each year; and this is increasing.

To understand and cure reproductive cancers the Robinson Research Institute is:

- > Identifying the common features of reproductive organs which are likely to contribute to cancer susceptibility in these tissues
- > Understanding the role of sex hormone responsive tissues and how their frequent changes compromise the immune system, leading to cancer development
- > Uncovering how diet, lifestyle and environmental factors encourage (or discourage) reproductive cancer development
- > Developing new treatment options to prevent cancer-related disability and death

Translational Impact

INFORMD Alliance

Almost 8% of women aged between 40-74 years have extremely high breast density which can make it difficult for doctors to detect breast cancer on a screening mammogram. Breast density is a highly contentious issue and until recently there was no information about breast density on any Australian government website, and no policies or position statements around reporting it.

Together with leading breast cancer researchers from 5 different institutions across Australia, A/Prof Wendy Ingman founded the INFORMD alliance (INformation FORum on Mammographic Density), with the goal of raising awareness around breast density and calling for the development of guidelines so that density can be routinely reported to women having mammograms.

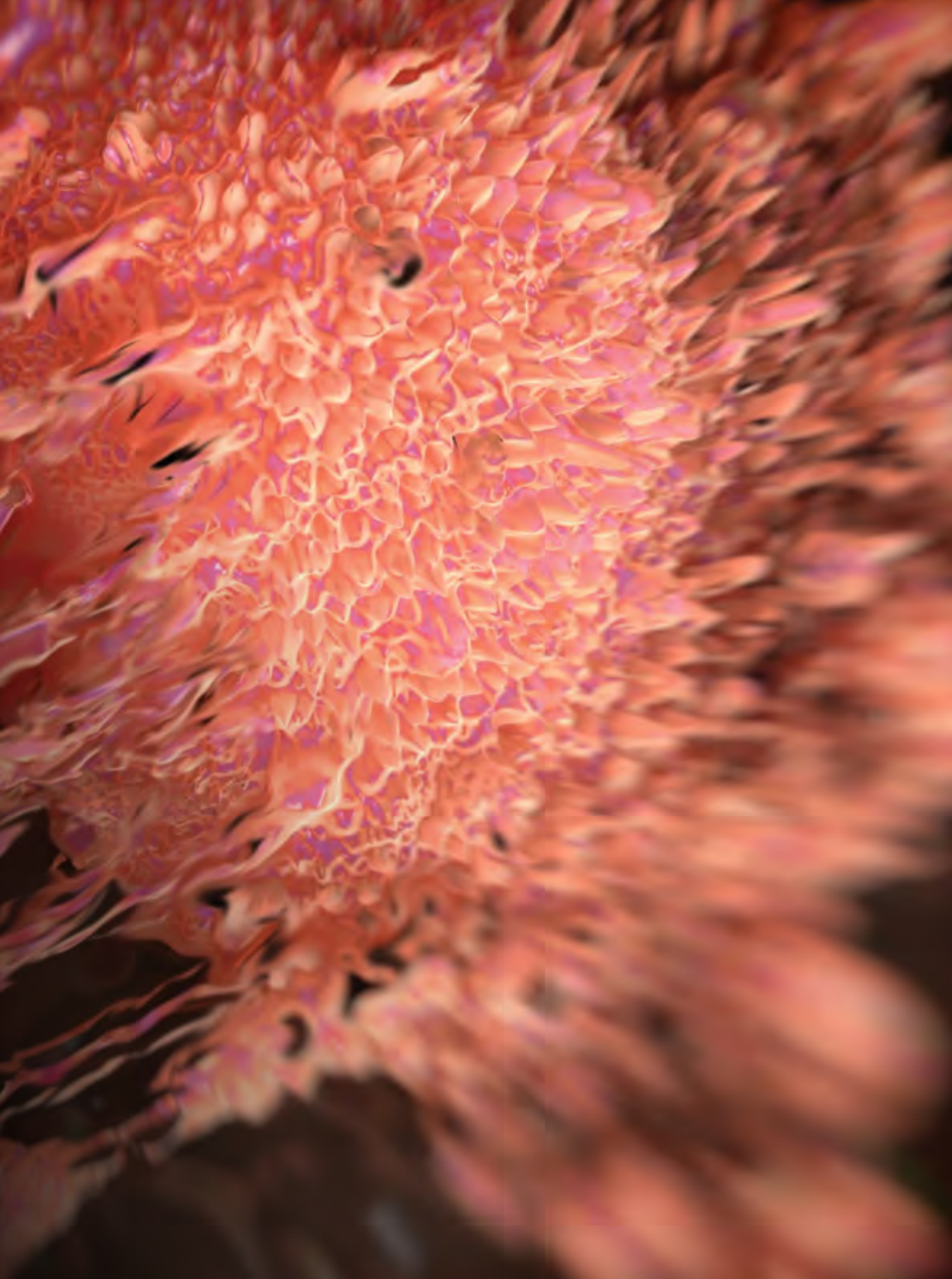
Ovarian cancer diagnosis

Despite improvements in surgery and new developments in chemotherapy, ovarian cancer mortality rates have not improved substantially over the last two decades. The poor prognosis results from late diagnosis and limited treatment options after recurrence. Important approaches to improve survival rates include early diagnosis that requires the identification of specific biomarkers, and the identification of more effective molecularly targeted therapies for advanced stage disease.

Prof Martin Oehler and Dr Carmela Ricciardelli's work investigating interactions between ovarian cancer and the mesothelium (a layer of cells surrounding abdominal organs) have identified a protein annexin A2 that plays a major role in ovarian cancer invasion. Annexin A2 is highly expressed in 90% of serous ovarian cancers and actively involved in the process of ovarian cancer metastasis. Additionally, they have demonstrated that local up-regulation of annexin A2 within the tumour is reflected in a systemic ~2.0-fold increase of annexin A2 in the plasma of patients with early stage serous ovarian cancer. Plasma annexin A2 levels in combination with CA125 significantly improves the sensitivity and specificity of detecting early stage serous ovarian cancer. These findings hold considerable promise for using annexin A2 as both a therapeutic target and diagnostic marker and improving ovarian cancer survival.

Advances in 2016

- > We identified a new blood cell based biomarker. Prof Tony Ferrante's group have shown that a protein expressed on human blood cells may be a biomarker of prognostic value in cancer and inflammatory conditions.
- > We discovered that chronic low-level inflammation caused by a protein called CCL2 could increase breast density and increase risk of breast cancer in an animal model. A/Prof Wendy Ingman and Dr Sally Sun's findings are the first to show that inflammation is a key driver of breast density and the associated increased risk of cancer.
- > We demonstrated that the HA inhibitor 4-MU can improve the response to carboplatin. Prof Martin Oehler and Dr Carmela Ricciardelli believe that reducing HA production is a promising strategy to improve ovarian cancer survival in serous ovarian cancer patients with chemo-resistant disease.
- > We showed that a range of environment and lifestyle stressors influence ovarian somatic cell function and in turn impact on oocyte and embryo health. A/Prof Darryl Russell found that these stress response mechanisms are important in the initiation and progression of cancers of reproductive organs.



Investigating early life origins of allergies and developing interventions



Allergies affect hundreds of millions of children worldwide and there is no cure. Asthma, rhinitis, eczema, dermatitis, food allergies and anaphylaxis are on the increase – now 20% of Australians suffer from at least one allergy.

To progress allergy and immunity research the Robinson Research Institute is:

- > Identifying environmental factors and events that occur during pregnancy that increase susceptibility to allergy in childhood
- > Identifying the genetic and epigenetic changes that occur in the placenta that program immune function in early childhood and increase susceptibility to allergy
- > Identifying biomarkers that predict the risk of allergy in childhood
- > Developing effective interventions for allergy prevention either during pregnancy or after birth
- > Uncovering the causes of food allergies and developing interventions to prevent and treat these allergies
- > Educating the community about how to safely manage allergies and asthma during pregnancy

Translational Impact

Infant feeding guidelines

Findings of the STEP (Starting Time for Egg Protein) study have been translated into the Australasian Society of Clinical Immunology and Allergy (ASCI) infant feeding guidelines. The STEP study is a randomised controlled trial looking at early versus late introduction of egg into an infant's diet. Findings from Prof Michael Gold, Dr Merryn Netting, A/Prof Debbie Palmer and Prof Maria Makrides's study showed that early introduction of egg does not prevent egg allergy. This is one of the large international trials that has provided an evidence base for feeding guidelines for infants around the introduction of egg to possibly prevent egg allergy.

Advances in 2016

- > Dr Kathy Gatford and colleagues from Monash University investigated in sheep models, how the prenatal environment affects allergy risk, and in particular, how limiting growth before birth reduces allergy susceptibility in progeny. Evidence to date is consistent with a role for fetal availability of 1-carbon donors such as folic acid during late gestation in determining allergic susceptibility after birth, and we are continuing to explore these mechanisms.

Tackling life-threatening infectious diseases





Protecting children and adolescents from serious infectious diseases is a national priority to secure the future health of the nation.

To eliminate life-threatening conditions in children the Robinson Research Institute is:

- > Improving the effectiveness of vaccine programs for pregnant women to increase protection for both women and their babies against serious infections such as influenza and whooping cough
- > Combatting life threatening infections such as meningococcal and pneumococcal disease by optimising infectious disease prevention
- > Testing new and current vaccines for babies, children, adolescents and pregnant women to ensure they are safe and effective
- > Uncovering how and why some health conditions, such as pregnancy, obesity and immune compromise, impact on vaccine effectiveness
- > Educating the community on the importance of vaccinations and incorporating community views and values into immunisation policy

Translational Impact

B Part of It Study

In South Australia the highest number of meningococcal disease notifications occur in adolescents, with the majority of these infections due to the B strain. Commencing at the end of 2016, the *B Part of it* study led by Prof Helen Marshall, will provide up to 60,000 adolescents in South Australia with a free licensed Meningococcal B vaccine.

Students will also supply a throat swab which will measure the effectiveness of the Meningococcal B vaccine in reducing carriage of *Neisseria meningitidis* in adolescents. If a herd immunity benefit is shown there is the potential to introduce Meningococcal B to Pharmaceutical Benefit Scheme, providing free coverage for Australian infants.

SMS Vaccination reminder

Although uptake of routine immunisations for infants and children is high, some infants do not receive vaccinations on time, leaving them vulnerable to serious infections.

Prof Helen Marshall and Mark McMillan's randomised controlled trial comparing receipt of vaccinations on time using

an SMS APP reminder system versus a calendar with immunisation dates, showed that SMS reminders improved timeliness of vaccinations by 45% for infants at 12 months.

SA Vaccinology Update

In partnership with SA Health, the Women's and Children's Hospital and SAHMRI, the RRI runs the annual *SA Vaccinology Update* with the VIRTU group leading the event.

In its 4th year, this event provides health care professionals with the latest research discoveries, policy changes, clinical trials and all vaccinology and immunology information, to ensure the best service, advice and care is provided to patients, with nurses able to claim CPD Points.

Advances in 2016

- > We discovered a novel regulatory element far upstream from a key immune function gene in T cells. Prof Simon Barry and colleagues are the first to show linkage of genetic risk to a specific target gene in human T cells by conformation capture. Their research may explain how genetics contributes to the pathobiology of autoimmune diseases including irritable bowel disease, multiple sclerosis and colitis.

Population interventions to secure a BetterStart for all children

For children to fulfill their health and development potential, early intervention is vital to ensure their optimal capabilities can be achieved; this includes their physical, mental, social and emotional health, cognitive ability and academic achievement.

To help children achieve the best start in life, and to improve future human capability, the Robinson Research Institute through the BetterStart group is:

- > Uncovering how to best support child health and development, particularly among disadvantaged populations, through trials, data linkage and observational studies
- > Developing pragmatic, preventative interventions across the multiple systems that support development, including health, child care, welfare, and child protection systems

Translational Impact

Online parenting support

As part of the CRE for *EMPOWER: Health Systems, Adversity and Child Wellbeing*, we developed an innovative nurse-moderated internet-based group intervention, to support mothers experiencing sub-threshold depressive symptoms and parenting problems when caring for infants.

These mothers are a high priority because of the common co-occurrence of these problems, their high prevalence, and their adverse impact on mother-infant relationships and later child development. During 2017 and 2018 we will evaluate the effectiveness of this new program.

Enhanced Service Delivery Framework

The BetterStart Child Health and Development Research Group using the SA Early Childhood Data Project, characterised the levels of vulnerability and disadvantage experienced by the South Australian community to inform the design of the Enhanced Service Delivery Framework for the South Australian Child and Family Health Service.

This work is directly contributing to the design of government-led services and interventions that aim to optimise the health and development of South Australia's children.

SA Early Childhood Data Project

Using data from the SA Early Childhood Data Project, Dr Rhiannon Pilkington and Prof John Lynch presented analyses on the trajectories of children through the SA child protection system to several SA government executive committees.

Following this, a two-page translational research brief was developed by the BetterStart group for media release following the delivery of the Nyland Royal Commission report into South Australia's Child Protection System. The key finding from this research brief is that 1 in 4 children in SA will have contact with the child protection system by age 10. This research is the first time in South Australia that the prevalence of child protection system contact has been widely disseminated, and this is the key result used by government Ministers including Premier Jay Weatherill and Minister Susan Close to communicate the gravity of this issue to the media and the wider community.

Biosocial panel

A/Prof Megan Warin convened the *Biosocial futures: from interaction to entanglement in the postgenomic age* panel at the European Association for the Study of Science and Technology and the Society for Social Studies of Science conference in Barcelona, with colleagues from the University of York (Canada) and Sheffield University (UK).

Speakers explored what epigenetics contributes to concepts of gender, race and class, where the understanding that intergenerational legacies can be transmitted epigenetically is highly relevant but novel territory. This work is important as it reinforces and explains the need for policies and programs to address inequity, as individuals cannot be responsible for overcoming historically entrenched disadvantage and accompanying poor health.

AEDC State and Territory Coordinator Training Workshop

Drs Angela Gialamas and Rhiannon Pilkington presented to state and territory coordinators on research and policy translation using the Australian Early Development Census (AEDC). This presentation provided examples of how the AEDC is being used in South Australia to inform government and early childhood policy conversations. They described how a profile of children who are both emotionally vulnerable on the AEDC and socioeconomically disadvantaged was used in policy; and are investigating whether the AEDC can predict future child protection system contacts.

A young child with curly hair is shown in profile, using a clear nebulizer mask over their nose and mouth. The child is holding the white nebulizer device with their right hand. In the background, there are colorful toys, including a red and blue structure and a yellow and green striped object. The scene is brightly lit, suggesting an indoor play area.

Pioneering interventions to improve the health of children

Many serious physical and mental disorders affecting adults have their origins in childhood. To prevent the development of disease and/or disability, interventions need to be administered in early life, be safe and as targeted as possible.

To tackle childhood genetic, neurodevelopmental, metabolic and immunological conditions, the Robinson Research Institute is:

- > Uncovering the causes of these childhood conditions through discovery research, large-scale clinical trials and cohort studies
- > Developing effective treatments and interventions to prevent disorders progressing from early life to adulthood
- > Running unique e-health delivery trials to provide healthcare services and parenting support

Translational Impact

Pancreatectomy and islet autotransplant

Australia's first total pancreatectomy and islet autotransplant in a child with hereditary pancreatitis was performed by Professors Toby Coates and Jenny Couper, along with interstate and international collaborators.

The 7-year-old boy had a severely fibrosed pancreas but has achieved a remarkable improvement in quality of life with only partial insulin now required.

Carina Biotech Launch

Carina Biotech is a newly established start-up company developing cellular immunotherapies, particularly for the treatment of childhood cancers.

This company was spun out of the \$63 million CRC for Cell Therapy Manufacturing, which was jointly established with the University of South Australia, with A/Prof Simon Barry leading the T cell therapy program.

Initial work will focus on developing technologies involving Chimeric Antigen Receptor T-cells ('CAR T-cells'), which have shown unprecedented results in clinical trials against leukaemia.

Watch the salt intake in children's diets

There has been little attention given to salt intake in children, including those at risk of heart disease. Dr Alexia Pena and Prof Jenny Couper have shown that dietary intake of salt is generally very high in children, associated

with consumption of processed snack foods. High daily intake of salt is contributing to poorer blood vessel function in children with diabetes. These findings support educating families about their children's salt intake, in addition to other risk factors contributing to heart disease.

ICMStemcell PTY ltd

Human embryonic stem cells offer considerable promise for treating a range of diseases and injuries for which no effective treatment exists, and which currently constitutes a significant health burden estimated to cost billions of dollars globally.

A/Prof Mark Nottle and colleagues have isolated a new embryonic stem cell type which differs from other stem cells, in that these are isolated earlier in development. These cells may have advantages for developing cell-based therapies compared with existing human embryonic stem cells.

Given this potential Mark and colleagues have filed a patent to protect their method, which has been granted in Australia and the United States. With support from TechInSA they have established the startup company - ICMStemcell Pty Ltd to raise funding to provide researchers with improved stem cells for developing cell-based therapies.

Advances in 2016

- > We found 14% of cases of cerebral palsy have likely causative single gene mutations and up to 31% have clinically relevant copy number variations. E/ Prof Alastair MacLennan and colleagues findings are significant as until recently, only 1-2% of cerebral palsy were linked to genetic causes. Through next generation sequencing of 183 cerebral palsy-affected children and 263 parents in our Biobank, we have found a greater genetic attribution.
- > We effectively modelled several intellectual disability genes using cell-based investigations through to mouse models. A/Prof Cheryl Shoubridge reported changes to genome wide gene expression in a mouse model to map the molecular pathways that are disturbed early in brain development.
- > We discovered that monotremes evolved a glucagon-like peptide 1 (GLP-1) gene that is resistant to degradation in human serum. Prof Frank Grutzner believes that this could be used to develop novel GLP-1 based treatment options for type 2 diabetes in children.
- > We isolated a new pluripotent cell type (Inner Cell Mass Stem Cells), isolated earlier in embryo development from the undifferentiated inner cell mass. A/Prof Mark Nottle believes these cells may have advantages for developing cell-based therapies including the potential to treat Type 1 diabetes.
- > We investigated the genetic basis of blood pressure regulation across infancy and childhood in three large birth cohorts. Prof Lyle Palmer discovered two novel loci and found that some, but not all, known adult blood pressure genes associated with childhood blood pressure.
- > We utilized CRISPR/Cas9 gene editing in a collaboration with the Australian Phonemics Network to generate the first Australian cystic fibrosis rat model. A/Prof David Parsons and his colleagues believe this model will allow the group to demonstrate, for the first time, that airway gene therapy can prevent cystic fibrosis lung disease from initiating.
- > We demonstrated that keeping count of daily steps and boosting physical activity can improve cardiovascular health in children with type 1 diabetes. Dr Alexia Pena's findings provide an easy intervention to protect life-long heart health in affected children.

Funding Highlights

During 2016 the Robinson Research Institute successfully attracted funding from major bodies to continue to support our research. A selection of highlights is listed below.

NHMRC

Centres for Research Excellence
commencing in 2016

\$2.5 million to Prof John Lynch

Prof John Lynch, Prof Michael Sawyer, Prof Ben Mol, Prof Claire Roberts, Prof Gus Dekker and A/Prof Naomi Dwyer awarded a CRE for *EMPOWER: Health systems, adversity and child well being*

Project Grants commencing in 2016

\$1.3 million to E/Prof Alastair MacLennan

Genetic pathways to cerebral palsy

\$920,972 to Prof Sarah Robertson

Priming the maternal immune response to resist inflammatory disorders of pregnancy

\$814,272 to A/Prof David Parsons

Identifying the role of airway stem cells in maintaining lentiviral mediated gene expression for cystic fibrosis lung disease

\$796,979 to Prof David Kennaway

Impact of disrupted sleep and rhythms during pregnancy on the mother and her offspring

\$683,622 to A/Prof Cheryl Shoubridge

Improving the phenotypic severity of intellectual disability and seizures caused by expanded polyalanine tract mutations in the ARX homeobox transcription factor

Targeted Call commencing in 2016

Prof Jozef Gecz – member of a team (led by Prof Kathryn North and Prof Andrew Sinclair) awarded \$25 million

Prof Jozef Gecz, together with 47 partner organisations led by Murdoch Children's Research Institute, awarded a Targeted Call for *Research into Preparing Australia for the Genomics Revolution in Health Care*

Centres for Research Excellence awarded in 2016

Prof Jozef Gecz and team (led by Dr Tony Roscioli) awarded \$2.5 million

Dr Tony Roscioli (Garvan Institute) together with Prof Jozef Gecz (CIB) and colleagues awarded a CRE for *Transforming the diagnosis and management of severe neurocognitive disorders through genomics*

Partnership Projects awarded in 2016

\$1.05 million to Prof Helen Marshall

Reducing vaccine preventable diseases in children: Using national active hospital based surveillance to evaluate and improve immunisation program performance

Project Grants awarded in 2016

\$1.5 million to A/Prof Rebecca Robker

Re-energising the pre-implantation embryo to extend lifetime health

\$1 million to Prof Simon Barry

Identification of the conformation dependant targets of autoimmune disease linked variation in human regulatory T cells

\$791,369 to A/Prof Chris Wilkinson

STan intrapartum fetal monitoring (cardiotocographic plus electrocardiographic) compared with cardiotocographic (CTG) monitoring alone: an Australian randomised controlled trial

\$523,988 to Prof Paul Thomas

Identifying the pathological mechanism of PCDH19-Girls Clustering Epilepsy

NHMRC–ARC Linkage Grant awarded in 2016

\$480,000 to Prof Sarah Robertson
Adelaide Flow Cytometry Facility

ARC

Prof Sarah Robertson awarded \$433,000 for her project: *Male to female sperm signalling – a new role for sperm in reproduction?* (commenced 2016);

Prof Frank Grutzner awarded \$380,000 for his project: *Non-coding RNAs in mammalian reproduction*;

Prof Jozef Gecz awarded \$234,000 for his project: *TREX-mediated nuclear mRNA export in neuronal differentiation and function*.

Channel 7 Children's Research Foundation

RRI members were awarded 11 project grants commencing in 2016/2017 totalling more than \$750,000. This includes \$75,000 to A/Prof Philippa Middleton for *Increasing*

breastfeeding and Aboriginal children's health through culturally appropriate and responsive support.

Diabetes Australia

Prof Michael Davies awarded \$75,000 for his project: *Why do children born after infertility treatment have more congenital heart defects?*

GlaxoSmithKline

Prof Helen Marshall awarded \$11 million to run the *SA Meningococcal B Vaccine Herd Immunity Study*.

Juvenile Diabetes Research Foundation

Prof Toby Coates awarded US\$750,000 for his project: *The Biodegradable Temporizing Matrix as an Alternative Site for Human Islet Transplantation*.

A/Prof Peter Cowan (St Vincents Hospital) together with A/Prof Mark Nottle (CIB) and colleagues awarded US\$1.04 million for their project: *Genetic modification to protect pig islets from T cell-mediated xenogeneic rejection*.

Lowitja Institute

Prof Vivienne Moore, Dr Alice Rumbold and colleagues awarded \$247,845 for their project: *Reclaiming strong Aboriginal and Torres Strait Islander identities through a gender equality lens*.

National Blood Sector

Prof Gus Dekker, A/Prof Michael Stark and Dr Nicolette Hodyl awarded \$139,123 in a R&D Pilot Grant for *RCT on iron need in pregnancy and after birth, single centre at LMH*.

US National Institutes of Health

Prof Claire Roberts awarded US\$953,209 through a RFA Human Placenta Project scheme for her research: *Maternal molecular profiles reflect placental function and development across gestation*.

Ovarian Cancer Research Foundation

Prof Martin Oehler awarded \$581,218 for two projects: *Blood proteomic signatures of ovarian cancer*; and *Autoantibody biomarkers for ovarian cancer detection*.

Research Foundation of Cerebral Palsy Alliance

Prof Jozef Gecz awarded \$261,442 for his project: *Multi-omics investigations of cerebral palsy causation in discordant monozygotic twins and singletons*.

Royal Adelaide Hospital

Prof Toby Coates, Prof Lyle Palmer and colleagues awarded \$400,000 for their project: *Pancreatic Islet Autotransplantation for Chronic Pancreatitis*.

SA Department of Premier and Cabinet

Prof John Lynch awarded \$980,000 for SA *Early Childhood Data Project*.

Stillbirth Foundation

Prof Ben Mol awarded \$50,000 for his project: *COSTIL Study: Core Outcomes in STILLbirth trials*.

The Hospital Research Foundation

A/Prof Wendy Ingman awarded \$100,000 for her project: *Exploring the impact of menstrual cycling on personalised medicine for premenopausal breast cancer patients*.

Viertel Charitable Foundation

Dr Brenton Hordacre awarded \$85,000 for his project: *Characterising motor network connectivity to improve application of non-invasive brain stimulation in stroke*.

Women's and Children's Hospital Foundation

RRI members were awarded 10 project grants commencing in 2016/2017 totalling more than \$450,000. This included \$74,875 to Dr Nicholas Smith for his project: *Diagnostic mass spectrometry profiling in acquired and genetic disorders of central nervous system myelination in childhood*.

University of Adelaide

Prof Jozef Gecz awarded a \$180,000 Equipment Grant for a *Multi-Electrode arrays and DNA/RNA Extractor*.

Fellowships and Awards

ARC

Commencing in 2016

Discovery Early Career Research Award

Dr Lachlan Jolly

Awarded 2016

Future Fellowship

Prof Frank Grutzner

NHMRC

Commencing in 2016

NHMRC Research Fellowship

A/Prof Darryl Russell and Prof Ray Rodgers

NHMRC-ARC Dementia

Research Development Fellowship

Dr Sam Buckberry and Dr Mitchell Goldsworthy

Awarded in 2016

NHMRC Research Fellowship

A/Prof Rebecca Robker

NHMRC Early Career Fellowship

Dr Carolyn Berryman and Dr Brenton Hordacre

Other Fellowships (awarded 2016)

CRE for PCOS – Early Career Fellowship

Dr Jodie Avery

Lloyd Cox Fellowship

Prof Michael Davies, A/Prof Michael Ridding and Dr Nicolette Hodyl

MS McLeod Fellowship

Postdoctoral Fellowship – Dr Christopher Hope
Postgraduate Fellowship – Megan Bater
PhD Scholarships – Alexandra McCarron and Mark McMillan

National Heart Foundation

A/Prof Lisa Moran

Research Foundation of Cerebral Palsy Alliance

Dr Mark Corbett

The Hospital Research Foundation

A/Prof Wendy Ingman

The University of Adelaide Fellowships

Dr Hannah Brown and Dr Zohra Lassi

Women's and Children's Health Network Clinical Fellowship

Dr Priya Augustine

Awards and Prizes

Asia Pacific Initiative on Reproduction

Dr Jodie Avery awarded Best Presentation

Australian Sleep Association

Anna Kontos awarded Best Poster Prize

Australian Society for Medical Research (ASMR)

Daniel Pederick received prize for the Best Presentation in the Field of Reproduction, Pregnancy or Child Health

Chinese Ambassador

Sally Sun received the Outstanding Self-Financed Chinese Students Studying Abroad Award

Endocrine-Related Cancers

Dr Carmela Ricciardelli was celebrated in the Endocrine-Related Cancers special issue, highlighting exceptional women in this area of research

EPiCSA

Ben Mayne and Dr John Schjenken received the joint award for the Best Epigenetic Research, and John also received the People's Choice Award

Fay Fuller Foundation

Alexandra Procter awarded an Honours Scholarship

Ferring Pharmaceuticals

Dr Vicki Nisenblat received the CREI Award

Fertility Society of Australia

Dr Rui Wang awarded Best Clinical Paper

Inflammation in Reproduction, Pregnancy and Development

Dr Loretta Chin, Dr John Schjenken, Dexter Chan and Bihong Zhang received Travel Awards

Natalie Aboustate and Tara Crawford received Travel Awards

International Federation of Placenta Associations

Natalie Aboustate and Rebecca Wilson received YW Loke New Investigator Awards

International Society for the Immunology of Reproduction

Ella Green received the International New Investigator Award



Healthy Development Adelaide (HDA)

Dr Alice Rumbold awarded the inaugural Women's Excellence in Research Award



Australian Academy of Science

Prof Sarah Robertson

Elected as a Fellow of the Australian Academy of Science for research in reproductive immunology, which has formed the basis for a new understanding of the origins of health at conception.

Visit science.org.au/fellowship/fellow to watch Prof Robertson's election video.

One North

Dr Hannah Brown Awarded a position at the Global Young Scientists Summit

Perinatal Society of Australia and New Zealand

Megan Bater awarded New Investigator Award and a Travel Award

PCHD19 Alliance

Prof Jozef Gecz awarded the Spirit of Progress Award

Royal New Zealand College of Obstetricians and Gynaecologists

Prof Ray Rodgers awarded Honorary Fellow and Dr Luke Oakde-Rainer awarded Best Student Paper

Science Excellence Awards

Prof Jennifer Couper was a finalist for the South Australian Scientist of the Year

Scientists in Reproductive Technology

Helana Shehadeh received the Young Scientist Award

Society for Reproductive Biology (SRB)

A/Prof Mark Nottle inducted as a Fellow of the Society, A/Prof Wendy Ingman received the Award for Excellence in Reproductive Biology Research and A/Prof Jeremy Thompson presented the Founders Lecture

Society for the Study of Reproduction

Dr Hannah Brown received International Award for Best Abstract from Australia and New Zealand

South Australian Branch

Public Health Association

Alexandra Procter awarded Best Overall Presentation

The Higher Education Sector Leadership Colloquium

A/Prof Louise Hull awarded NEELI Scholarship

The University of Adelaide

Prof Jodie Dodd, Prof Claire Roberts, Prof Ray Rodgers, A/Prof Michelle Lane, A/Prof Mark Nottle, A/Prof Darryl Russell and A/Prof Jeremy Thompson awarded Lloyd Cox Strategic Excellence Awards

Prof Helen Marshall, A/Prof Wendy Ingman, A/Prof Megan Warin, Dr Zohra Lassi and Dr Alice Rumbold received Women's Research Excellence Awards

A/Prof Rebecca Robker received Executive Deans Award

Prof Helen Marshall, Chris Health, Su-San Lee, Mark McMillan and Bing Wang received the Alice Davey Award

Dr Michelle Clarke, Dr Consuelo Estrella and Gai McMichael awarded the Deans Commendations for Doctoral Thesis Excellence Ella Green and Rebecca Wilson awarded Bob Seamark Scholarships

Dr Catherine Chittleborough awarded Undergraduate Teacher of the Year

Dr Melanie McDowall awarded Best Transdisciplinary Publication

Rebecca Wilson awarded Florey Medical Research Foundation Award

Dexter Chan and Ella Green received Adelaide Medical School Awards

Dr Hannah Brown awarded ECR Travel Award

Bing Wang received School of Medicine Travel Award

Collaboration

Our members are forming collaborations with for-purpose organisations to improve the evidence-base and effectiveness of their work

Hospitals

Members are embedded within the 5 SA public hospitals.

Peak Bodies

We advocate for the significance of our research through memberships and partnerships with peak bodies including Association of Australian Medical Research Institutes and PSANZ.

Not-for-Profits

We partner with Not-for Profit organisations including The Birthing Kit Foundation Australia and SHIneSA to support evidence-based impact.



Academic

Collaborating with researchers around the globe. Members were invited to present at more than 120 meetings and conferences, of which 56 were at international events.

Clinicians

Many clinicians are RRI members, and we collaborate with Fertility clinics, hospitals and other primary health organisations.

Industry

Research translation and implementation is facilitated through Industry clients and pharmaceutical collaborations and our MRCF membership.

Health Consumers

Collaborating with health consumers ensures our research is relevant and provides access to unique perspectives and solutions.

Government

Our members collaborate with local, state and federal Government on projects to improve the health of the community.

Collaboration highlights

VARTA

The Victorian Assisted Reproductive Treatment Authority (VARTA) provides independent information and support for individuals, couples, and health professionals on fertility, infertility, assisted reproductive treatment, and the best interests of children born.

VARTA and the Robinson Research Institute together with Andrology Australia and the Jean Hailes Foundation make up the *Your Fertility* Coalition funded through the

Commonwealth Department of Health. Through this Coalition, the *Your Fertility* webtool has been developed. The webtool supports members of the public to gauge their fertility based on a range of variable factors, including age, weight, smoking and alcohol consumption. RRI will work with VARTA, Flinders University and SAHMRI, to enhance the webtool so that we can understand and apply effective approaches to improving fertility through interactive web-based tools.



Your Fertility webtool

Women's and Children's Health Research Alliance (WCHRA)

Through the WCHRA Alliance, the Institute collaborates with the Women's and Children's Hospital, Women's and Children's Hospital Foundation, Women's and Children's Health Research Institute, Women's and Children's Health Network, SA Pathology, SAHMRI, and other research groups at the Women's and Children's Hospital site.

Many of our Research Leaders and their teams reside in the Women's and Children's Hospital. This alliance seeks to foster research excellence in the area of women's and children's health in South Australia, translate research findings into policy and practice, establish a highly visible focus for funding, ensure sufficient research infrastructure needs are met, and communicate the benefits of health investment to the wider community.

South Australian Health & Medical Research Institute (SAHMRI)

The RRI and SAHMRI are partnering to develop collaborative research programs, joint research appointments, and shared core facilities. By working together we will progress health advances for mothers, babies and children, and tackle adult conditions through investigating early origins of health and disease.

Our partnership seeks to advance a

Clinical Partners



Dr Alexia Peña

Dr Alexia Peña is a Paediatric Endocrinologist at the Women's and Children's Hospital and a Senior Lecturer at the University of

Adelaide. In her clinical role, Alexia regularly consults for children with type 1 diabetes, obesity or other hormonal conditions, driving her to progress research into this space to improve the life-long health of children living with these diseases.

Around 11,000 children in Australia have type-1 diabetes (T1D), significantly affecting not only their lives, but also their families. Insulin injections, blood glucose monitoring, stringent meal planning, and being prepared

for high and low blood glucose levels are all part of the daily routine for these families. For people with type 1 diabetes, cardiovascular disease is the most common cause of morbidity and mortality, and can reduce the lifespan by 15 years. Alexia discovered early changes in the thickness of blood vessels in children with T1D; and this, together with a build-up of plaque as these children age, leads to the high risk of cardiovascular disease (3x the chance of those without T1D even with good glucose control).

Alexia's research is focused on developing early interventions to mediate this risk. She discovered that by taking an extra 1,000 steps a day, there was a measureable decrease in the arterial thickness, blood pressure, lipids and weight. She is also investigating

the impact of a high sodium diet on blood vessels, and the use of drug interventions such as metformin, which improves also the way insulin works and weight.

Alexia's other research interests include improving the management of adolescents with severe obesity and improving diagnostics for adolescents with Polycystic Ovary Syndrome.

Alexia is an Investigator of the NHMRC's Centre of Research Excellence for PCOS with RRI members: Professors Rob Norman, Ray Rodgers, Michael Davies, Ben Mol and Dr Alice Rumbold. Additionally, Alexia collaborates with Prof Jenny Couper and Dr Roger Gent around vascular health in T1D.

progressive research agenda in South Australia where we can provide an optimal environment for world-class research and to attract, support and train the very best researchers in our areas. Collaboration examples include:

- > Co-appointment of Professors Jozef Geacz and Ben Mol
- > Establishing a shared Flow Cytometry Facility
- > Jointly resourcing the SA Genome Editing Facility
- > Research collaboration through the Aboriginal Families Health Research Partnership
- > Co-hosting research and community forums

Healthy Development Adelaide (HDA)

HDA promotes, facilitates and enables multi-disciplinary research that advances the understanding of healthy development, and ensures the physical, psychological and social health of infants, children and adolescents.

HDA plays a key role in South Australia, linking research, service delivery and policy development, and is led by Institute members Professors Claire Roberts and Michael Sawyer, with the RRI as a founding partner.

HDA runs a suite of events each year and supports the next generation of researchers with top-up PhD scholarships funded by the Channel 7 Children's Research Foundation, travel grants and awards.

SA Fertility Clinics

Robinson Research Institute members have a key presence in clinical practice and research development at two leading fertility clinics in Adelaide: Fertility SA and Repromed. The Institute's Research findings and new treatment options are translated into practice, ensuring greater choices for couples seeking fertility assistance. In 2016 RRI co-hosted a GP workshop and visiting speaker program with Fertility SA, and offered an additional honours scholarship with the support of Repromed - the Repromed Reproductive Health Scholarship.

Cure4 Cystic Fibrosis

Cure4 Cystic Fibrosis is taking action to create a future free of the devastating effects of cystic fibrosis for people living with the disease, and their families. They exist solely to find a cure for cystic fibrosis.



The Foundation joins forces with a formidable community to raise funds that can be invested in the work of the world leading Cystic Fibrosis Airway Research Group, led by pioneering scientist and RRI Research Leader, A/Prof David Parsons. They strive to accelerate a potential cure for cystic fibrosis airway disease toward human clinical trials.

Birthing Kit Foundation Australia

The Birthing Kit Foundation Australia's (BKFA) vision is a world in which preventable maternal and newborn mortality and morbidity has been eliminated. BKFA works to provide a clean and safer birthing environment for women in developing countries by facilitating the assembly and supply of clean birthing kits. The BKFA birthing kit was developed to address the potentially fatal impact of infection acquired during childbirth, which is a leading cause of an estimated 3.3 million newborn deaths and 300,000 maternal deaths globally each year. The kit contains disposable gloves, a small piece of soap, a sterile scalpel blade, gauze, a plastic birthing sheet and pieces of string for tying the cord. Over the last decade, BKFA have distributed more than 1.5 million kits throughout Africa, Asia and the Pacific regions.



Since April 2016, BKFA and RRI have been working on a collaborative project to assemble evidence regarding the impact and effectiveness of birthing kits on maternal and newborn outcomes, as well as factors that hinder or facilitate the use of birthing kits for delivery.



Dr Victoria Nisenblat

Dr Victoria Nisenblat is a Specialist in Obstetrics and Gynaecology and is undertaking a subspecialty training in reproductive

endocrinology and infertility (CREI). She works as CREI Fellow in multiple locations throughout SA both in metropolitan and rural areas. Vicki also practices as Obstetrician and Gynaecologist and holds an affiliate appointment as a Clinical Academic and Senior Researcher at the University of Adelaide. Her experience spans menstrual and hormonal disorders, conditions that impede infertility in men and women, and strategies to optimise natural fertility. Vicki has a particular clinical and research interest in endometriosis.

Approximately 10-15% of women live with endometriosis, often taking many years to be correctly diagnosed. It is a chronic hormonal condition in young women where the lining of the womb grows outside the womb, mainly into the abdominal cavity, but can extend into other organs. The symptoms vary largely between women and often are similar to these experienced from other health issues. Symptoms may range from occasional cramps and period pains to severe debilitating pain that gets progressively worse over time. Low mood, chronic fatigue, headaches, bowel issues and bladder complaints are common. Some women also experience infertility.

The only way to accurately test for endometriosis is through surgery, which is invasive, costly and explains the delay experienced by many women in receiving an accurate diagnosis. Accurate low-invasive tests are expected to be more acceptable to women, make diagnosis faster. Currently

it is not understood what causes endometriosis and why the symptoms vary between women. There is no cure for endometriosis, with researchers continuing to look for new treatments to alter the course of the disease and to improve quality of life in the affected women.

Vicki is undertaking laboratory work and systematic reviews directed towards establishment and evaluation of less invasive accurate diagnostic testing for endometriosis and presents her work at national and international conferences. She will spend 6 months in Beijing in 2017 aiming to work with international collaborators to progress research on diagnostics and improving treatment strategies for women with endometriosis.

Vicki recently completed her PhD with A/Prof Louise Hull and collaborates with RRI members Professors Rob Norman, Ben Mol and Neil Johnson.



Universities

RRI members collaborate with universities and research institutes around the globe to maximise efforts in answering major research questions. Examples of our important collaborations are listed below:

Australia

CSIRO
Flinders University
Garvan Institute of Medical Research
Hudson Institute of Medical Research
Mater Medical Research Institute
Menzies School of Health Research
Monash University
Northern Territory Government
Royal Children's Hospital
SAHMRI
Telethon Kid's Institute
The Florey Institute
The University of New South Wales
The University of South Australia
The University of Western Australia
Victoria University
Walter and Eliza Hall Institute

Argentina

Juan A. Fernandez Hospital
University of Buenos Aires

Belgium

Limburg Catholic University
Vrije Universiteit Brussel

Brazil

Sao Paulo State University

Canada

McGill University
The Hospital for Sick Children
University of Alberta
University of Montreal

China

Peking University
Shanghai Jiao Tong University
Zhejiang University

Denmark

National Institute of Public Health
University of Copenhagen

France

Inserm - French National Institute of Health and Medical Research
University of Nantes

Germany

Goethe University
Limes-Institut-Bonn
Max Planck Institutes
School of Life Sciences
University of Marburg

Ireland

University College Cork

Italy

Universita Cattolica
University of Sassari

Japan

Japan Synchrotron Radiation Research Institute
Osaka University

The Netherlands

Radboud University
Rotterdam University
University of Groningen
Utrecht University

New Zealand

The University of Auckland
University of Otago

Spain

University of Madrid

South Africa

University of Witwatersrand

South Korea

Chungbuk National University

Switzerland

ETH Zurich
University of Lausanne

United Kingdom

Bristol University
King's College London
National Institute for Medical Research
Public Health England
The University of Edinburgh
University College London
University of Cambridge
University of Oxford
University of Westminster

United States of America

Baylor College of Medicine
Benaroya Research Institute
Centers for Disease Control and Prevention
Emory University
Harvard Pilgrim Health Care
National Institutes of Health
University of California
University of Washington

Vietnam

Vietnam National University

West Indies

St. George's University

Zimbabwe

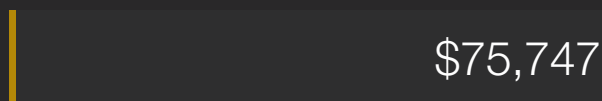
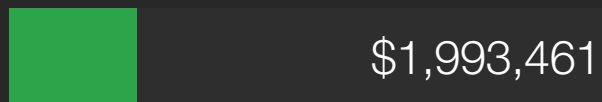
Medicines Control Authority of Zimbabwe

International

World Health Organization

Financials 2016

\$24,570,966

**ARC****Donations & Foundations****Government & Public Sector****Industry****NHMRC****Non Commonwealth Competitive****International Competitive**

Institute Engagement

Community Events

The RRI hosts public events throughout the year to educate the local community about ways to improve their health, and the health of their families.

Science Meets Parliament **March**

Drs Melanie McDowall and Hannah Brown attended Science meets Parliament (SmP) in Canberra. SmP links researchers with politics, policymaking and the media, while educating parliamentarians (Including Malcolm Turnbull and Bill Shorten) about the ground-breaking work being undertaken by attendees.

Research Tuesdays **May & July**

Hosted by the University of Adelaide, Institute members presented at two Research Tuesdays events in 2016; Prof Claire Roberts – *Pregnancy screening tools to predict which women will develop complications foreshadowing heart disease*; and Prof Helen Marshall – *Pregnancy protection*.

Men's Health Matters **May**

Co-hosted by the RRI and Healthy Development Adelaide, attendees heard from Dr Nicole McPherson, Dr Deidre Zander-Fox, A/Prof Darryl Russell and Prof Gary Wittert, who presented on the topic: *Making healthy babies – men's health matters*.

Lloyd Cox Memorial Lecture **September**

The Institute's flagship annual public lecture was presented by Prof Fiona Stanley AC, FAA, FASSA on the topic *Before the bough breaks – data and research to guard our children's future*. Professors Fiona Stanley and Sarah Robertson pictured below.



Making Babies in the 21st Century **November**

The RRI teamed up with the Australasian Sexual Health Conference to host the public forum *Making Babies in the 21st Century*. This event featured presentations from Prof Sarah Robertson, A/Prof Darryl Russell, Prof Vivienne Moore, Prof Gary Wittert, Dr Christopher Fox and Dr Helen Calabretto.

Research Events

Involvement in research events provides members the opportunity to network with peers, share research discoveries, learn about recent advances and build existing and new collaborations to address important health issues.

ENDIA state-wide meeting

February

The national ENDIA study held its first study-wide face-to-face meeting, with 45 scientists, clinicians and research nurses from VIC, NSW, QLD, WA and SA attending, to discuss the current progress and future directions of the internationally unique investigation that aims to identify the genetic and environmental factors contributing to type 1 diabetes development.

WCH Co-hosted Grand Rounds

April, August & October

A new initiative in 2016, the RRI co-hosted three of the Women's and Children's Hospital's Grand Rounds seminars: Prof Euan Wallace, Hudson Institute of Medical Research – *Does the bed need the bench? Perinatal translational research*; Prof Rob Norman, Fertility SA – *From little things, big things grow – the importance of health around conception*; and Prof Jonathan Morris, Kolling Institute – *The short and long term implications of late preterm and early term birth*.

New Frontiers for a Healthy Start to Life **May**

The RRI hosted the third New Frontiers thinktank conference, to bring together researchers spanning the healthy start topic, both internal and external to the RRI. This unique conference stimulates new interactions and encourages BIG thinking, prospectively and proactively.

Writing a systematic review following Cochrane methods

September

The RRI together with the SAHMRI Theme *Healthy Mothers, Babies and Children*, hosted the annual workshop by Cochrane Australia to support current and prospective authors of Cochrane reviews. This three-day workshop provided 25 participants with a comprehensive overview of the methods required to write their protocols and get started on their systematic reviews of health care interventions.

Fertility SA co-hosted seminars

August & September

For the first time, the RRI and Fertility SA co-hosted two seminars on fertility science. The two presenters were: Dr Tracey Edgell, Hudson Institute for Medical Research – *Biomarkers of endometrial receptivity*; and A/Prof Caroline Gargett, Ritchie Centre – *Role of endometrial stem/progenitor cells in endometriosis and infertility*.

INSPIRE Series **September**

The INSPIRE Series luncheon, provides the opportunity for the Institute's early career researchers to network with and learn from the Institute's Emeritus Faculty. Prof Bob Seamark was the guest presenter, reflecting on his career for this third RRI-hosted event.

RRI Symposium **November**

The Institute's largest internal event brings members together for a day of collaboration and networking. Members have the opportunity to present their work and learn about the research of their colleagues. The program focused on reproductive cancers, healthy lifestyle in the 21st century and global health. Award recipients included: Holly Groome – Best Student Poster, Dr John Schjenken – Best ECR Poster and Prof Helen Marshall – Director's Award.

SA Vaccinology Update **November**

The RRI teamed up with SA Health, the Women's and Children's Hospital and SAHMRI to host the third SA Vaccinology Update. This full day event for immunisation providers, doctors and researchers featured presentations that showcased the latest developments in immunisation research, policy and programs.



ENDIA Australia-wide meeting attendees

Sponsorships

To support members in their career growth and to increase reputation, the RRI strategically sponsored the following events in 2016:

SRB

For the 11th year in a row the RRI sponsored the Society for Reproductive Biology at its annual joint meeting with the Endocrine Society of Australia and the New Zealand Bone and Mineral Society. The Institute sponsored the Robinson Research Institute Award for Excellence in Reproductive Biology, which was awarded to A/Prof Wendy Ingman.

IRPD

For the first time, the RRI sponsored the Inflammation in Reproduction, Pregnancy & Development Conference which was a satellite meeting of the 16th International Congress of Immunology. RRI members presented at the conference and IRPD Travel Awards were received by Dr Loretta Chin, Dr John Schjenken, Dexter Chan, and Bihong Zhang.

SIRT

RRI sponsored A/Prof Mark Baker (The University of Newcastle), to present at the 2016 Scientists in Reproductive Technologies conference held in Adelaide. A/Prof Baker met with RRI members and presented a Friday seminar as part of our invited speaker program.

EpiCSA

RRI sponsored the inaugural Epigenetics Consortium of South Australia annual meeting, to support this newly established group of South Australian epigenetic researchers. Dr John Schjenken was awarded the Best EMCR Presentation and joint winner of the RRI Award for Best Epigenetic Research in Reproduction, jointly received by RRI member Ben Mayne.

ASMR

Sponsorship of the ASMR Annual Scientific Meeting provides the opportunity to support early career researchers and students in their career development. The Institute sponsored the Robinson Research Institute prize for the best presentation in the field of reproduction, pregnancy or child health, which was awarded to RRI member **Daniel Pederick** (pictured below).





Media Impact

The Robinson Research Institute's research discoveries are actively publicised in the media and on social media to better inform the community about reproduction and fertility, pregnancy and child health issues.

In 2016, the Institute disseminated 20 media releases, with top performing stories including:

Baby boys at greater risk of pregnancy complications

Prof Claire Roberts has shown that boy babies are much more likely to experience potentially life-threatening outcomes at birth than girls. Her research investigated data looking at more than 574,000 SA births over a 30-year period. Published in PLOS ONE.

Breast density matters in detection of breast cancer

Almost 8% of women have extremely high breast density which can make it harder to detect breast cancer on a screening mammogram. A/Prof Wendy Ingman is co-leading a new Australian alliance of breast cancer researchers who are working together to raise awareness of this issue to improve cancer diagnosis.

For more information on breast density visit informed.org.au.

Could assisted reproduction reduce birth defects for older women?

Babies born to women aged 40 and over from assisted reproduction have fewer birth defects compared with those who conceive naturally. Prof Michael Davies' findings are contrary to widespread belief that the greater risk of birth defects after assisted conception is due to the frequent use of these services by older women. Published in BJOG.

Kids' eating habits highlight need for healthier lunchboxes

Dr Melissa Whitrow found that children aged 9-10 years old are receiving almost half of their daily energy requirements from discretionary or junk foods. The study evaluated the core food intake of more than 430 South Australian children aged 9-10. Published in the Journal of Human Nutrition and Dietetics.

Drug shows promise for preventing preterm birth

A drug known for its abilities to switch off pro-inflammatory pathways was successfully tested, entirely preventing preterm birth in pregnant mice. Prof Sarah Robertson's lab also significantly reduced infant fatalities, and reversed low birth weight normally associated with preterm birth. Published in the Nature journal, Scientific Reports.

Winter conception increases mum's diabetes risk

Women whose babies are conceived in winter are more likely to develop gestational diabetes during pregnancy, increasing a range of risk factors for both child and mother. Dr Petra Verburg and colleagues' study investigated more than 60,000 births in SA over a five-year period. Published in BMJ Diabetes Research & Care.





Comparative Reproductive Biology of Mammals

Professor Bill Breed

Comparative morphology of gametes and their interaction at fertilisation in Australian mammals

Australia's unique mammalian fauna has a southern Gondwanan origin, the marsupials, and a northern Asian origin, the native rodents. Our work focuses on the evolution and morphology of the sperm and eggs, and their interaction at fertilisation, in selected species from both of these groups of mammals.

As comparative cellular morphologists with an interest in evolution, our recent work has looked at the quantity and quality of male gametes produced in Australian mammals. Very large differences in relative testes mass occur across the species which is likely to result from interspecific differences in intensity of inter-male sperm competition and breeding system. We are currently probing the effects of these differences on gamete morphology.

In 2016 our research focused on the effects of variation in post-copulatory sexual selection on sperm form and the resultant morphological differences that occur. We found that species with a relatively large testes mass produce far more uniform and streamlined spermatozoa than those with small relative testes mass where the sperm populations produced are highly polymorphic and include various pathological forms even in sexually mature adults. These highly polymorphic sperm populations in the few species in which they occur show similarities to those in humans. Next we will test our predictions that the differences in sperm morphology relate to differences in sperm behaviour within the confines of the female reproductive tract to determine their effects on fertilisation success.

Group Members

Research Leader: Bill Breed

Senior Lecturer: Eleanor Peirce

Research Assistants: Hannah McLennan and Tessa Pahl

Affiliate: Natasha Speight

External Collaborators: Chris Dickman (University of Sydney), Stefan Lupold (University of Zurich), Richard Oko (Queen's University) and Kevin Rowe (Museum Victoria)



Comparative Genome Biology

Professor Frank Grützner

Comparing genetic and epigenetic mechanisms in mammalian species to improve our understanding of how human diseases originate in development

The comparison of genes, genomes and epigenetic mechanisms in different species has provided many fundamental insights into how genes function in humans, how they evolved, and how they contribute to diseases. Our recent research has demonstrated that studying genes in species distantly related to humans has the potential to develop novel drugs, including treatment for type 2 diabetes, and provides new potential markers and insight into cancers.

The Comparative Genome Biology group studies gene evolution in mammalian species, in particular monotremes (platypus and echidna). Monotremes have an extraordinary sex chromosome system that reveals novel genes and pathways involved in sex determination and differentiation in all mammals. Monotremes have undergone

radical changes to their stomach anatomy and physiology, accompanied by massive loss or change of genes involved in digestion. As a result, studying monotremes provides the opportunity to identify the role of key genes involved in stomach function and metabolism in humans and other mammals.

In 2016 we continued to make progress investigating the role of genes in the piRNA pathway in ovary and ovarian cancer. We also embarked on investigations into how the interaction and methylation pattern of the Igf2 region has changed in ovarian cancer compared to normal cells. A highlight was our publication about the evolution of the dual function and evolution of monotreme GLP-1 in gut and venom.

Group Members

Research Leader: Frank Grützner

Visiting Research Fellow: Dan Kortschak

Lecturer: Tasman Daish

PhD Candidates: Jasmina Gerbert, Ellen Gillett, Reuben Jacob, Eunice Lee, David Stevens and Nicole William

RRI Collaborators: Stefan Hiendleder, Martin Oehler, Carmela Ricciardelli and Darryl Russell

External Collaborators: Peter Donnelly (Oxford University), Briony Forbes (Flinders University), Henrik Kaessman (University of Lausanne), James Turner (Medical Research Council London) and Wesley Warren (University of Washington)



Obesity and Metabolism

Associate Professor Leonie Heilbronn

Does when we eat matter more than what we eat to prevent type 2 diabetes?

The prevalence of type 2 diabetes continues to rise worldwide, is increasingly evident in children, and is reaching pandemic levels. The notion that it is due to obesity, resulting from excessive energy consumption and reduced physical activity, is overly simplistic. Circadian desynchrony also promotes obesity and impairs glucose tolerance in mice, and is a feature of modern human lifestyles. Intermittent fasting and time restricted feeding have emerged as a tool that can reset peripheral clocks and improve glucose metabolism in animal models.

The Obesity and Metabolism group seeks to identify optimal and sustainable eating patterns that will prevent the development of type 2 diabetes in at-risk populations. We aim to provide new data regarding the

long-term health benefits of periodic fasting in human health, through preclinical models to help understand the molecular basis for these improvements.

In 2016 we completed an intervention trial in 90 women examining the metabolic benefits of alternate day fasting diets, demonstrating that these diets are as effective as calorie restriction diets in improving metabolic health. We are examining whether we can reduce fasting lengths and still receive benefit. Additionally, we completed a trial examining if a 14 hour overnight fast improves glycaemia in men at risk of type 2 diabetes. With collaborators at UniSA, we are also examining whether not eating at night can reverse the metabolic consequences of shift work.

Group Members

Research Leader: Leonie Heilbronn

Postdoctoral Fellow: Amy Hutchinson

PhD Candidates: Rajesh Chaudhary, Bo Liu and Prashant Regmi

RRI Collaborators: Rob Norman and Rebecca Robker

External Collaborators: Siobhan Banks and Alison Coates (University of South Australia), Grant Brinkwork and Manny Noakes (CSIRO), Michelle Keske (Menzies), Dorit Samochoa-Bonet (Garvan Institute), Charmaine Tam (University of Sydney) and Gary Wittert (University of Adelaide)



Endometriosis

Associate Professor Louise Hull

Developing diagnostic and therapeutic tools to treat pelvic pain and infertility caused by endometriosis

Endometriosis affects 10% of women and adolescents, causing pelvic pain and infertility. Despite its prevalence, there are no reliable non-invasive diagnostic tests for endometriosis and therapies to treat pelvic pain and subfertility are limited and costly, and treat symptoms, rather than cure disease.

The Endometriosis group seeks to provide better diagnostic and therapeutic options for women with endometriosis by improving our understanding of the basic biology of endometriosis, developing manipulable models of the disease and then conducting clinical trials.

In 2016 this group published 5 Cochrane reviews determining the best way to non-invasively diagnose endometriosis and concluded that imaging tests such as MRI

and Ultrasound show some promise as triage tests for endometriosis, but surgery remains the most sensitive method of diagnosis.

They discovered 2 microRNAs that alter the progression of endometriosis in a mouse model of endometriosis and are assessing the effect of a deficiency of these microRNA in human tissues. They have conducted a clinical trial assessing the effect of an oral GnRH antagonist on endometriosis pain.

To explore methods of improving fertility in women, a randomised controlled clinical trial assessing a new growth factor containing IVF media for patients with poor embryo development has been completed. Collaborations with other research groups exploring the underlying pathology of pregnancy loss and embryo implantation problems have been forged to help women

carry a pregnancy to term.

Group Members

Research Leader: Louise Hull

Specialist Surgeon: Susan Evans

Clinical Lecturer: Vicki Nisenblat

PhD Candidate: Kavita Panir

RRI Collaborators: Robert Norman, Sarah Robertson, John Schenken, David Sharkey and Hannah Brown

External Collaborators: Neil Johnson, Cindy Farquar and Cris Print (University of Auckland)



Breast Biology and Cancer

Associate Professor Wendy Ingman

Exploring how the immune system in the breast affects cancer and mastitis susceptibility

Breast cancer is the most common type of cancer in Australian women, affecting 1 in 8 before the age of 85. While breast cancer treatment has improved, little progress has been made towards reducing incidence. Lactation mastitis is even more common, and is an inflammatory breast disease that affects 1 in 4 breastfeeding women. The disease causes localised pain and is frequently accompanied by the rapid onset of systemic symptoms including fever, muscle aches and fatigue. The challenges posed by this disease often lead women to cease breastfeeding, leaving their infants at increased risk of respiratory and gastrointestinal diseases as babies, and a number of non-communicable diseases such as heart disease and diabetes as adults.

The Breast Biology and Cancer group works closely with surgeons and oncologists at The Queen Elizabeth Hospital to understand how

hormones and immune cells affect breast function. The group seeks to better understand the biological mechanisms that underpin breast cancer risk factors, including menstrual cycling, pregnancy and mammographic density, to aid in the prevention and early detection of breast cancer.

A key focus in 2016 was understanding how immune cells and inflammatory factors affect breast density. Breast density is an important risk factor in the development of breast cancer, however little is known about the biological mechanisms that cause highly dense tissue to be at increased risk. We demonstrated that inflammation within the breast can drive increased density and cause increased risk of cancer in an animal model. This research paves the way for new approaches to reducing breast density and preventing breast cancer.

Group Members

Research Leader: Wendy Ingman

Postdoctoral Scientists: Danielle Glynn and Pallave Dasari

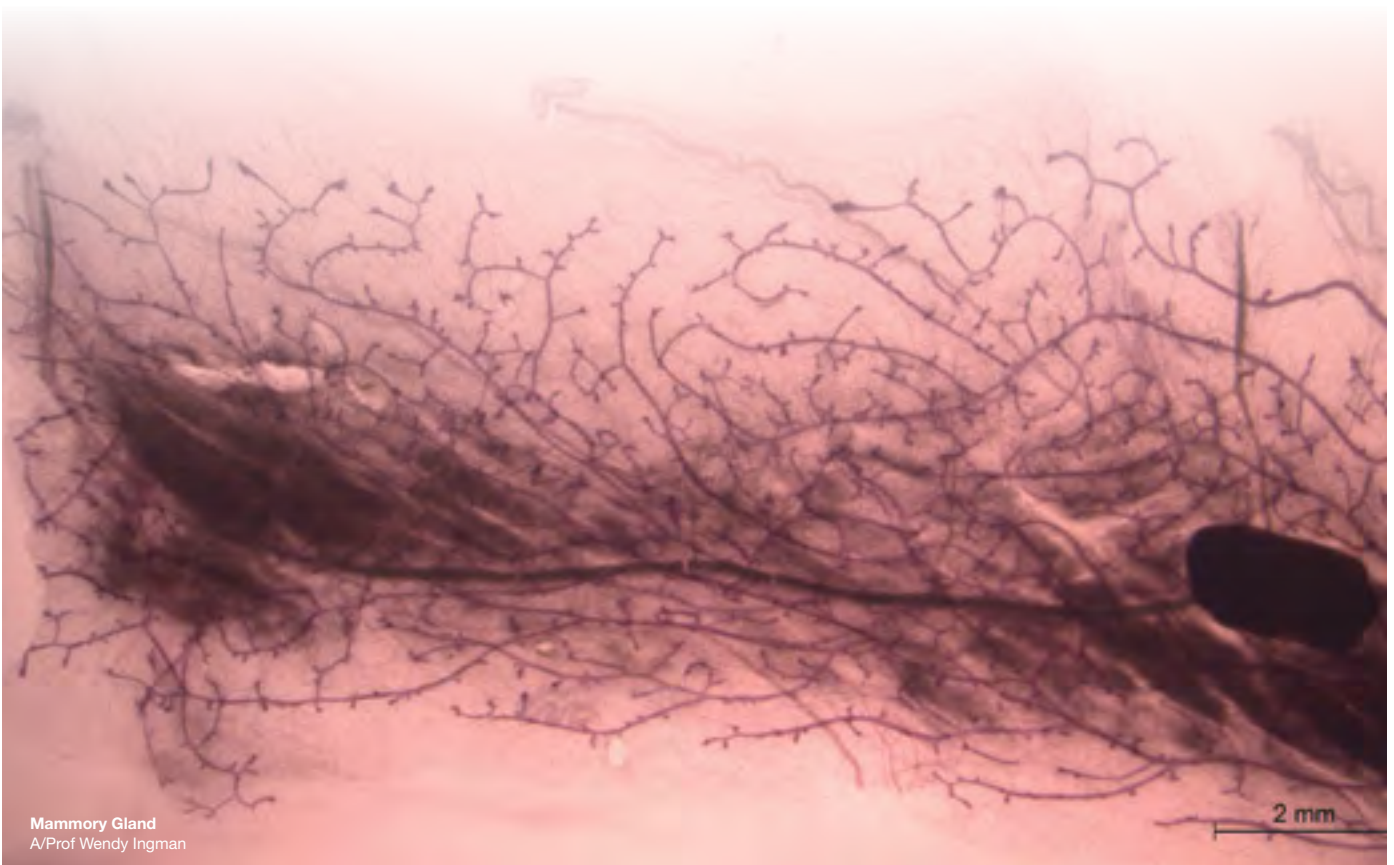
Research Officer: Leigh Hodson

Research Nurse: Kathryn Mildren

PhD Candidates: Sarah Bernhardt, Siti Noor Din, Sally Sun, Joe Wrin, Vahid Atashgaran and Maddison Archer

RRI Collaborators: Simon Barry and Sarah Robertson

External Collaborators: Lisa Amir (LaTrobe University), Kara Britt (Peter MacCallum Cancer Centre), Andreas Evdokiou and Mark Hutchinson (University of Adelaide), Fiona Pixley (University of Western Australia), Tim Price and David Walsh (The Queen Elizabeth Hospital) and Rik Thompson (Queensland University of Technology)



Mammary Gland
A/Prof Wendy Ingman



Gamete and Embryo Biology

Professor Michelle Lane

Understanding the impact of environmental insults to gametes on developmental trajectory of the embryo, and disease development in offspring

We now understand that modifications to the molecular constituency of either the egg or sperm not only impact the viability of the resultant embryo, but also program growth in utero which may influence disease risk in adulthood. Obesity and various lifestyle factors have been shown to change molecular marks in gametes, and it is estimated that the youth of today will be the first generation to live shorter lives than their parents. Understanding the pathways of transmission of parental environmental insults to the next generation is essential for developing strategies to intervene.

The Gamete and Embryo Biology group is uncovering the functional pathways in the transmission of parental health cues to the next generation, and seeks to identify the characteristics of “good” eggs and sperm.

Our research program principally focuses on how obesity and sub-fertility impact the metabolic health and epigenetic marks in gametes and embryos that alter the growth and development of subsequent offspring.

In 2016, we demonstrated in animal models that females with overweight fathers had alterations to genes in the ovarian cells (associated with reduced fertility), and amplified metabolic disturbances when exposed to high-fat diets as adults. We completed a systematic review demonstrating that obese men are more likely to be sub-fertile and their partners experience more miscarriages. We also showed that when both parents were obese there is an additive negative impact on embryo development and offspring health.

Group Members

Research Leader: Michelle Lane

Research Fellow: Nicole McPherson and Tod Fullston

Postdoctoral Fellow: Francesca Bell

Research Assistant: Lauren Sandeman

PhD Candidates: Alexander Penn and Helena Shehadeh

Honours Students: Cassandra Carbone, Rachael Collett and Dania Ruminski-Smith

Affiliate Member: Deirdre Zander-Fox

RRI Collaborators: Julie Owens, Sarah Robertson and Rebecca Robker

External Collaborators: John Aitken (University of Newcastle), Rob McLachlan (PHMRI), Moira O’Byrne (Monash University) and Gary Wittert (University of Adelaide)



Reproductive Endocrine and Medicine

Professor Rob Norman AO

Optimising outcomes in fertility treatments and preconception care

Approximately 1 in 10 couples will experience infertility and more than 1 in 10 women suffer from Polycystic Ovary Syndrome (PCOS), which is the most common condition of female reproduction. Environmental impacts such as poor nutrition, obesity, pollutants and stress significantly influence reproductive potential, and fertility treatments are being increasingly utilised by patients at earlier stages than in the past. PCOS is on the rise, and sufferers may experience associated sequela such as metabolic syndrome, diabetes and cardiovascular disease.

The Reproductive Endocrine and Medicine group are part of the NHMRC Centre of Research Excellence (CRE) for PCOS and are seeking international consensus on evidence based guidelines for PCOS. We’re looking at the reproductive life journey of

couples who access fertility treatment in a clinic where IVF is freely available, and seek to develop the best methods to determine the most appropriate treatment for infertility.

Our CRE for PCOS is collaborating with more than fifteen major groups around the world to develop evidence based guidelines. In November 2016, we held an international meeting in Victoria to set the scene for international guidelines to be developed over the next two years, and are looking at models of care for PCOS with Monash University. Additionally, we presented our results on the human growth hormone study which showed no material advantage of using growth hormone for poor responders on IVF, and commenced our study on the life journey of couples of reproductive conditions who present to a fertility clinic.

Group Members

Research Leader: Rob Norman

Research Fellows: Tania Chechurova

RRI Collaborators: Leonie Heilbronn, Louise Hull, Neil Johnson, Ben Mol, Rebecca Robker and Ray Rodgers

External Collaborators: Bart Fauser (University of Utrecht), David Handelsman (ANZAC Institute), Rodger Hart (University of Western Australia), Joop Laven (Rotterdam University), Lisa Moran (Monash University), Lois Salamonsen (Hudson Institute), Qiao Jie (Beijing), Chen Zhi-Jiang (Shanghai and Shangdong) and Helena Teede (Monash University).



Reproductive Biotechnology

Associate Professor Mark Nottle

Exploring the therapeutic potential of inner cell mass stem cells

Human embryonic stem cells (ESCs) offer considerable promise for curing a range of intractable diseases and injuries, for which no effective treatment currently exists, and constitutes a significant health burden estimated to cost billions of dollars globally. It is now generally accepted that human ESCs are not the same as those originally isolated in mice. As such there is a question mark over their potential to provide effective treatments which has led researchers to suggest that the full potential of ESCs can only be realised if cells like that originally isolated in mice are used.

The Reproductive Biotechnology group have isolated a new pluripotent cell type (Inner Cell Mass Stem Cells) which differs from those

isolated in mice and humans, in that it is isolated earlier in embryo development from the undifferentiated inner cell mass, rather than the epiblast. As such we believe it may have additional advantages for developing cell based therapies.

Our current research is focused on characterising this cell type, including examining its therapeutic potential as a treatment for Type 1 diabetes. Our method is covered by a patent which has been granted in Australia and the United State and is pending in other territories. We formed the start-up company ICMStemcell Pty Ltd to commercialise our research, with future work focused on isolating this cell type in humans and examining its therapeutic potential.

Group Members

Research Leader: Mark Nottle

Research Fellows: Ivan Vassilev

Research Assistants: Stephen McIlfratrick and Jess Zemtis

Honours Student: Staci Jennings

Summer Student: Anmoi Sainin

Affiliate Member: Sean O'Leary

RRI Collaborators: Toby Coates, Stefan Hiendleder, Michelle Lane, David Parsons and Paul Thomas

External Collaborators: Peter Cowan (St Vincents Hospital), Emmanuele Cozzie (University of Padua), Wayne Hawthorne and Philip O'Connell (Westmead Millennium Institute), Nam Kim (Chungbuk University), Andrew Lew (Walter and Eliza Hall Institute), Simon Robson (Harvard Medical School) and John Paul Soulliou (Universite de Nantes)



Reproductive Cancer

Professor Martin Oehler and Dr Carmela Ricciardelli

Identification of novel biomarkers and therapeutic targets for ovarian cancer

Ovarian cancer is a devastating disease and the leading cause of death from gynaecological malignancies. It affects approximately 1 in 90 women in Australia with over 70% of patients presenting with advanced stage. Despite improvements in surgery and chemotherapy, ovarian cancer mortality rates have not changed markedly over the last decade. To significantly improve ovarian cancer survival rates, identification of ovarian cancer biomarkers for early detection is essential, paired with improved molecularly targeted therapeutics.

The Reproductive Cancer group seeks to understand the mechanisms involved in ovarian cancer spread, resistance to chemotherapy and the identification of novel biomarkers for early detection.

Recent work focused on understanding the role of the extracellular matrix molecule hyaluronan (HA), in the development of

ovarian cancer chemotherapy resistance. We found that HA production is elevated in chemo-resistant primary ovarian cancer cells, and the HA inhibitor, 4-methylubelliferone (4-MU) could increase the cytotoxic effect of carboplatin. We also demonstrated that the cytoskeletal protein, keratin 5 is associated with chemotherapy resistance and progression in serous ovarian cancer. Developing strategies to target keratin 5 may prevent recurrence and chemotherapy resistance in serous ovarian cancer patients.

Next steps are to investigate whether a protein and autoantibodies recently identified in plasma can be used as diagnostic markers for serous ovarian cancer in independent cohorts, and whether annexin A2 inhibitors are effective at inhibiting growth and invasion using recently developed in vivo models of ovarian cancer.

Group Members

Research Leader: Martin K Oehler and Carmela Ricciardelli

Senior Scientist: Anne Macpherson

Postdoctoral Researcher: Noor Lokman

Research Assistant: Anita Oehler

Honours Student: Rachel Ho

RRI Collaborators: Frank Grutzner, Ray Rodgers and Darryl Russell

External Collaborators: Peter Hoffmann and Florian Weiland (University of Adelaide), Stuart Pitson (University of South Australia), Andrew Ruzsiewicz (SA Pathology) and Andrew Stephens (Monash University)



Reproductive Immunology

Professor Sarah Robertson

Understanding how the immune system enables healthy conception and pregnancy, and is a key factor in infertility and disorders of pregnancy.

In pregnancy, the woman's immune cells must adapt to support and assist healthy pregnancy. This requires an active state of immunological tolerance to be established to allow embryo implantation, and development of the placenta and fetus. Many common reproductive and pregnancy disorders - including unexplained infertility, recurrent miscarriage, preeclampsia and preterm birth - have their origins in immune and inflammatory disturbances.

The Reproductive Immunology group explores the mechanisms that 'prime' the female immune system before and during conception, to assist embryo implantation and placental development. We focus on how contact with the seminal fluid elicits a sequence of events that stimulate generation of cells called regulatory T cells (Treg cells), that are anti-inflammatory, protect the implanting embryo, and promote vascular adaptation for placental development.

In 2016, we identified specific molecules in the seminal plasma of men that interact with cells in the reproductive tissues of women, to influence the immune adaptation for pregnancy. Cytokines, hormones and non-coding microRNAs are identified as important players. We have begun to explore why some men may have insufficient immune-regulatory activity - including the effects of obesity, environmental toxins and age.

Additionally, we progressed work to investigate new drug compounds for tackling preterm birth. By suppressing pro-inflammatory events induced by infection or other insults in late gestation, small molecules that block Toll-like receptor 4, and or peptide antagonists of IL-1 signalling, are showing substantial promise in inhibiting the upstream steps that otherwise ultimately lead to premature birth.

Group Members

Research Leader: Sarah Robertson

Research Fellow: Kerrilyn Diener

Senior Postdoctoral Researchers: Lachlan Moldenhauer and David Sharkey

Postdoctoral Researchers: Peck Chin and John Schjenken

PhD Candidates: Dexter Chan, Ella Green, Tom Kieffer, Kavita Panir, Hanan Wahid and Bihong Zhang

Research Officer: Camilla Dorian

Honours Student: Holly Groome

RRI Collaborators: Simon Barry, Louise Hull, Wendy Ingman, Rebecca Robker and Jeremy Thompson

External Collaborators: Sylvain Chemtob (University of Montreal), Mark Hutchinson (University of Adelaide), David Olson (University of Alberta) and Kenner Rice (National Institute of Health, Washington)



Ovarian Cell Biology

Associate Professor Rebecca Robker

Discovering the biological mechanisms that drive ovulation and embryo development

A good egg at the right time is required to produce a healthy new baby. Yet, rapidly changing environments and lifestyles are challenging this highly sensitive biology with profound implications for fertility and the health of offspring. For instance, approximately 60% of Australian women are overweight or obese, and this is associated with anovulation and Polycystic Ovarian Syndrome, reduced pregnancy rates, and increased risk of obesity for their children.

The Ovarian Cell Biology group is investigating the biological mechanisms by which ovarian cells endow the oocyte with the capacity to form an embryo and then trigger its timely release. This information is essential for understanding the foundations of reproduction and the earliest stages of embryogenesis. Using both genetic

and dietary mouse models of obesity, we have shown that the detrimental effects of obesity on female reproduction and embryo development commence with dramatic alterations in oocyte quality.

In 2016 their research received a new boost of funding from the NHMRC, which will enable their lab to grow and advance their work, which is determining how maternal nutrition prior to conception influences obesity susceptibility in children, and to uncover the most effective methods for preventing the obesity-inducing signals in the oocyte from altering embryogenesis.

These discoveries are leading to a new understanding of female fertility and will have applications for the development of infertility treatments, therapies for optimising animal reproduction, and non-steroidal

contraceptives. Further, identifying biological determinants of offspring obesity risk and their reversibility provides much needed evidence for women's health policies.

Group Members

Research Leader: Rebecca Robker

Postdoctoral Researcher: Sonja Frolich and Linda Wu

PhD Candidates: Macarena Bermudez Gonzalez and Siew Wong

Honours Student: Yasmyn Gordon

RRI Collaborators: Leonie Heilbronn, Michelle Lane, Robert Norman, Darryl Russell and Jeremy Thompson

External Collaborators: Michael Barry and Ryan Rose (Fertility SA), John Carroll (Monash University), Mark Febbraio (Garvan Institute) and Jon Hennebold (Oregon National Primate Research Center)



Ovarian Developmental Biology

Professor Ray Rodgers

Understanding how the ovary produces oocytes and hormones, what can go wrong and why

Reproductive health significantly impacts a woman’s wellbeing throughout her life, irrespective of her choice to have children. In addition to producing eggs, the ovary’s hormones govern cyclical changes regulating somatic and psychological health at puberty, across the menstrual cycle, during pregnancy, and in parturition, lactation and menopause. Very common disorders of the ovary such as polycystic ovary syndrome affect up to 18% of women of reproductive age, and some women experience failure of the ovary, premature menopause, and ovarian cancers.

The Ovarian Developmental Biology group studies the cell biology of the ovary to understand how the ovary functions, and to discover what can go wrong in disease. Ovarian cells carry out many of the unique functions of the ovary including growth of the

follicle and hormone production, and if these cells do not function properly, infertility and hormone imbalances can result.

In 2016 we examined expression of genes in adult ovaries and fetal ovaries to identify genes which appear to be co-regulated. In particular, we found four PCOS-related genes to be highly expressed critically early in the developing ovary, indicating that PCOS may be entrained before birth. Continuing our collaboration with Dr Hugh Harris, we are testing the hypotheses that follicle behaviour changes with aging, leading to a deterioration of the eggs. Additionally, in collaboration with Dr Lisa Martin of Monash we discovered the function of enzymes involved in the synthesis of steroid hormones, which is providing us with new drug targets.

Group Members

Research Leader: Ray Rodgers

Postdoctoral Researcher: Katja Hummitzsch

Research Officer: Nicholas Hatzirodos

Research Assistant: Wendy Bonner

PhD Candidates: Katrina Copping, Monica Hartanti and Qianhui Wan

Masters Student: Jasmine Kelly

Honours Student: Nicole Bastian

Affiliate Member: Helen Irving-Rodgers (Griffith University)

RRI Collaborators: Michelle Lane, Sarah Robertson and Darryl Russell

External Collaborators: Richard Anderson (University of Edinburgh), Ross Bathgate and John Wade (Howard Florey Institute), Hugh Harris (University of Adelaide), Phil Knight (University of Reading), Lisa Martin and Dagmar Wilhelm (Monash University), Viv Perry (University of Nottingham) and William Rainey (University of Michigan)



Ovarian and Reproductive Cancer Cell Biology

Associate Professor Darryl Russell

Defining the molecular mechanisms of hormone control of ovarian folliculogenesis

Ovarian follicles coordinate input from the maternal system and oocyte secreted factors to guide oocyte maturation. This interaction impacts the endocrine health of women and ultimately the lifelong health of offspring.

The Ovarian and Reproductive Cancer Cell Biology group focuses on defining the molecular pathways in the ovary required for the development of high competence oocytes which lead to healthy embryos and offspring. Ovarian follicles coordinate input from the maternal system and oocyte secreted factors to guide oocyte maturation, and this interaction impacts the endocrine health of women, and the developmental trajectory of the embryo and the fetus.

These pathways are essential to the proper growth of ovarian follicles and their oocyte cargo are ideal targets for developing contraceptives that directly block ovulation. Cancers of the reproductive organs also

respond to hormones which regulate their initiation and growth through similar pathways. The group seeks to harness this knowledge to improve reproductive health and to advance treatments for infertility and cancer.

In 2016 our group published a number of studies which characterised novel aspects of the molecular control of oocyte development and ovarian function. We demonstrated that a range of environmental and lifestyle stressors influence ovarian somatic cell function, and in turn, impact oocyte and embryo health. The mechanisms by which stressed oocytes signal to somatic cells and the response intended to prevent damage continue to be investigated. These stress response mechanisms are important in the initiation and progression of cancers of reproductive organs which are emerging from our recent research.

Group Members

Research Leader: Darryl Russell

Postdoctoral Researcher: Kylie Dunning

PhD Candidates: Adrian Kaczmarek and Doan Thao Dinh

Research Officer: Laura Watson

Honours Student: Yasmyn Gordon

RRI Collaborators: Simon Barry, Frank Grutzner, Michelle Lane, Carmela Ricciardelli, Claire Roberts, Sarah Robertson, Rebecca Robker, Ray Rodgers and Jeremy Thompson

External Collaborators: Juan Carlos Rodriguez-Maneque (University of Grenada), Robert Gilchrist (University of New South Wales) and John Sandy (Rush University)



Neural Development

Professor Paul Thomas

Generation and analysis of mouse models for epilepsy and intellectual disability

Neurological disorders are amongst the most common condition in children. The Neural Development group seeks to uncover the genetic causes of neurological disorders with a particular interest in epilepsy and intellectual disability, which affect approximately 3% of the population.

Using mouse models and stem cells, the group seeks to understand the disease mechanism that underpins these debilitating conditions. Using CRISPR/CAS9 genome

editing, the group established novel mouse models for neurological disease genes, which are providing unique insights into the genetic control of brain development and the biological basis of mental retardation and epilepsy.

In 2017 the group will continue to expand their expertise in genome editing, and will analyse existing mouse models of epilepsy and intellectual disability to investigate disease mechanisms and explore new therapies.

Group Members

Research Leader: Paul Thomas

Postdoctoral Research Fellow: Stefka Tasheva

Research Assistants: Sandie Piltz and Melissa White

PhD Candidates: Ruby Moffat, Daniel Pederick, Louise Robertson and Ella Thomson

Masters Student: Chandran Pfitzner

Honours Student: Connor Larson

RRI Collaborator: Jozef Gezc

External Collaborator: Robin Lovell-Badge (Francis Crick Institute)



Early Development

Associate Professor Jeremy Thompson

Understanding altered metabolic states within oocytes and embryos, and epigenetic mechanisms controlling growth

Accompanying oocyte maturation and fertilisation are dynamic molecular and biochemical processes that have a major impact on subsequent embryonic and fetal development, as well as adult health. The maturing oocyte and newly fertilised egg is extremely sensitive to the microenvironment within the maternal reproductive tract, and this is reflected in a process of 'resetting' of its epigenetic code. If the metabolic microenvironment surrounding the oocyte and embryo is altered as a result of IVF, diet and lifestyle factors, this will influence the epigenetic mechanisms that ultimately control the growth rate and development potential of the resulting fetus.

The Early Development group seek to explain how environmental stress impacts the metabolic and epigenetic development of the embryo, to produce new tools to measure the changes, and to successfully develop interventions to reduce the impact. In 2016 we continued to focus on the influence of hyperglycemia and hypoxia on oocyte and early embryo development.

In addition, our work within the ARC Centre of Excellence for Nanoscale BioPhotonics focused on transfer of optical technologies into the early embryo development field. From the application of new fluorophores, we are mapping the metabolic heterogeneity between individual blastomeres of embryos, revealing that whole embryo metabolic analysis often masks the variability between individual blastomeres. This will be further enhanced in 2017 with the establishment of a hyperspectral microscope in our laboratory. Additionally, we continued to explore the potential of autofluorescence measurements as novel biomarkers of oocyte and early embryo developmental competence, and further developed our understanding of the role of haemoglobin in oocytes and embryos.

Group Members

Research Leader: Jeremy Thompson

Postdoctoral Researchers: Hannah Brown and Melanie McDowall

Senior Research Officer and Laboratory Manager: Lesley Ritter

Research Assistants: Tiffany Cheow and Annie Whitty

Manager, IVF Vet Solutions: Marie Anastasi

PhD Candidates: Megan Lim, Hanna McLennan, Ryan Rose and Avishkar Saini

Technical Officer: Anwar Fatohi

Honours Students: Joseph Femia and Sophie Kedzior

Visiting Scientist: Karen Kind

RRI Collaborators: Michael Davies, Louise Hull, Michelle Lane, Mark Nottle, Sarah Robertson, Rebecca Robker and Darryl Russell

External Collaborators: Andrew Abell, Hayley McGrice and Yvonne Stockes (University of Adelaide), Michael Barry, Rob Norman and Ryan Rose (Fertility SA), Jose Buratini (Universidade Estadual Paulista), Pabio Certica (University of Buenos Aires), Michel DeVos and Johan Smits (Vrije Universiteit Brussel), David Gardner (University of Melbourne), Brant Gibson (RMIT), Robert Gilchrist (University of New South Wales), Ewa Goldys and Nicki Packer (Macquarie University), Jen Kelly and Alan Tilbrook (SARDI), David Mottershead (Keele University), Simon Walton (Australian Reproductive Technologies) and Deirdre Zander-Fox (Repromed)



Health of Women and Babies

Professor Caroline Crowther and Associate Professor Philippa Middleton

Improving the care of women and babies through evidence-based clinical practice

The Health of Women and Babies group seeks to improve health for women and babies by answering questions of major importance in the field of maternal and perinatal health; generating research evidence of the highest quality; and ensuring that research findings are incorporated into health care practice.

The multidisciplinary research team has strong local, national and international collaborations in maternal and perinatal research, with strategic commitment to research, education and training. High quality and timely maternal and perinatal research is conducted, evaluated and translated into clinical practice and health policy.

In 2016 the group continued to coordinate and collaborate in the conduct of major randomised clinical trials and studies

including the MAGENTA Trial - administering magnesium sulphate at 30 to 34 weeks gestational age for fetal neuroprotection; STRIDER Trial - NZAus - Sildenafil Therapy In Dismal Prognosis Early-Onset Intrauterine Growth Restriction; and My Baby's Movements Trial – maternal awareness of fetal movements to prevent stillbirth.

Additionally, we are conducting a major translational health project funded by the Cerebral Palsy Alliance, the WISH Project (Working to Improve Survival and Health for babies born very preterm). We support authors within the Australian and New Zealand Satellite of the Cochrane Pregnancy and Childbirth Group who published 11 new protocols, 13 new reviews and 16 updated reviews in The Cochrane Library.

Group Members

Research Leaders: Caroline Crowther and Philippa Middleton

Research Fellows: Shanshan Han, Zohra Lassi and Thach Tran

Clinical Trials Manager: Pat Ashwood

Data Managers: Vincent Ball and Sasha Zhang

PhD Candidates: Rehana Salam and Emily Shepherd

Research Assistants: Michaela Gooding and Elise Thompson

Research Officers: Melissa Ewens and Mary Paleologos



Obstetric Medicine

Professor Bill Hague

Improving outcomes for pregnant women with medical complications

Over 10% of pregnant women experience medical complications. Complications may predate pregnancy, or develop during or after pregnancy, with some cases threatening the lives of both mother and baby. While early identification and appropriate therapy is vital, the research base for some therapeutic decisions is limited with insufficient evidence to support interventions.

The Obstetric Medicine group seeks to develop and evaluate interventions for two major medical disorders of pregnancy; gestational diabetes and preeclampsia, together with the most common liver disorder of pregnancy, intrahepatic cholestasis.

In 2016, the Treatment Of Booking Gestational diabetes Mellitus (TOBOGM) trial started recruitment. The Folic Acid Clinical Trial (FACT) completed recruitment and the data is at the cleaning stage. For the Metformin in Gestational diabetes (MiG) follow-up studies, two honours students completed preliminary work in the assessment of the 12 year olds, in collaboration with Drs Julia Pitcher and Luke Schneider. Additionally, we collaborated with Prof Catherine Williamson (UK) on a major project to genotype women with previous severe early onset cholestasis in relation to their bile acid transporters, as well as completing a 10-year review of women with intrahepatic cholestasis at the Women's and Children's Hospital and the Lyell McEwin Hospital.

Group Members

Research Leader: Bill Hague

Research Coordinator: Suzette Coat

PhD Candidate: Mansi Dass Singh

Honours Students: Jago MacDonald Van Dam and Oliva-Paris Quinn

RRI Collaborators: Jennifer Couper, Jodie Dodd, Ben Mol, Julie Owens and Julia Pitcher

External Collaborators: Hanneke de Vries (Free University Hospital), Michael Fenech (CSIRO), Anand Hardikar (University of Sydney), Laura Magee (University of British Columbia), Marc Rodger, Mark Walker and Shi-Wu Wen (University of Ottawa), Janet Rowan (Auckland Hospital), David Simmons (University of Western Sydney) and Catherine Williamson (King's College London)



Lifelong Health Research

Professor Jodie Dodd

Start early, stay healthy, stop obesity

In Australia, 64% of adults and 25% of children are overweight or obese, representing a considerable health and economic burden for the community. Maternal overweight and obesity has been identified as a risk factor for infant and childhood obesity.

The Lifelong Health group recruit women into studies investigating dietary and physical activity interventions during pregnancy that may impact pregnancy and birth outcomes, and long-term health outcomes for children. We have demonstrated that modest improvements in diet and physical activity of pregnant women with a BMI above the healthy range, led to a reduction in the risk of an infant being born with a birth weight above 4 kg.

In 2016 we completed follow-up assessments of 3 to 5 year old children born to women who participated in the LIMIT randomised trial; which assessed a diet and lifestyle intervention of 2,200 pregnant women who were overweight or obese. Anthropometric data was obtained from 75% of the children, with data to be analysed and published in 2017.

In 2017, we will continue current pregnancy lifestyle intervention studies and follow up children at six and 18 months, and we will finalise protocols for weight loss studies for overweight and obese women planning pregnancy.

Group Members

Research Leader: Jodie Dodd

Clinical Researchers: Chad Andersen, Rosalie Grivell and Andy McPhee

Clinical Trials Manager: Andrea Deussen

Senior Statisticians: Jennie Louise and Lisa Yelland

Research Coordinator: Angela Newman

Research Dietitian: Shanshan Han

Data Manager: Sasha Zhang

Research Assistants: Lauren Cates, Ashlee Fairclough, Lavern Kannieappan, Erin Keen and Caroline Sheppard

PhD Candidates: Cecelia O'Brien, Casey Nottage, Amanda Poprzecny and Tulika Sundernathan

Honours Students: Rebekah Clark and Rebecca Greco

Affiliate Members: Jonathan Karnon, Maria Makrides and Prashanthan Sanders

RRI Collaborators: Bill Hague, Jennifer Couper, Lynne Giles, Ben Mol, Vivienne Moore, Robert Norman, Julie Owens, Jeffrey Robinson and Ian Symonds

External Collaborators: Annick Bogaerts (Limburg Catholic University), Emma Carlsen and Nina Geiker (University of Copenhagen), Roland Devlieger (University Hospitals KU Leuven), Jan Dickinson (King Edward Memorial Hospital), Matt Gillman (Harvard Pilgrim Health Care), Mark Kilby (Birmingham Women's Hospital), John Kingdom, Greg Ryan and Rory Windrim (Mt Sinai Hospital), Berthold Koletzko (Ludwig-Maximilians University), Debbie Lawlor (Bristol University), Ritta Luoto (UKK Institute for Health), Fionnuala McAuliffe (University College Dublin), Dorte Moller Jensen (Odense University), Susan Phelan (California Polytech State University), Lucilla Poston (King's College London), Kristina Renault (University of Copenhagen), Phil Robinson (Women's and Children's Hospital), Wendy Scheil (South Australian Pregnancy Outcome Unit), Mette Tanvig and Christina Vinter (University of Southern Denmark), Shakila Thangaratinam (Queen Mary's University London) and Liliانا Voto (Juan A. Fernandez Hospital)



Epigenetics and Genetics

Professor Stefan Hiendleder

Understanding epigenetic and genetic mechanisms and programming in prenatal development to optimise outcomes

Prenatal growth trajectory and birth weight are strongly associated with developmental capacity and health throughout life. We know that prenatal growth and weight at birth are determined not only by nucleotide sequence of genes, but also by epigenetic mechanisms such as imprinting, which regulate gene expression and phenotype at a higher level.

The Epigenetics and Genetics group focuses on dissection of the complex molecular genetic architecture of prenatal growth trajectory and birth weight. We uncover novel epigenetic and genetic effects on prenatal growth and their interactions with environmental factors.

In 2016 we used an animal model to determine drivers of largely sex-specific fetal overgrowth that manifests at birth

and impacts postnatal growth and development. We found non-mendelian and sex-specific polar over-dominance effects, i.e. molecular, endocrine and phenotypic expression patterns depending on inheritance of maternal or paternal alleles, that drive fetal phenotype from mid-gestation onwards. Our observation of complex X and Y chromosome dependent polar over-dominance, and other novel interaction effects, in the IGF and Thyroid hormone axes, help to explain sex-specific fetal growth patterns and polar over-dominance in birthweight.

Our current work focuses on collaborative bioinformatic analyses of gene and miRNA expression networks in key tissues that control placental and fetal phenotype.

Group Members

Research Leader: Stefan Hiendleder

Postdoctoral Researcher: Dana Thomsen

PhD Candidates: Amanda Camp, Consuelo Estrella and Entesar Shuaib

Summer Students: Marie Breuer, Judith Fischer, Merle Drechsel and Birte Mertens

RRI Collaborators: Karen Kind, Kathy Gatford, Mark Nottle, Julie Owens, and Claire Roberts

External Collaborators: Axel Janke (Goethe University), Sergio Ledda (University of Sassari), Tim Smith (USDA), Susanne Ulbrich (ETH Zurich) and Eckhard Wolf (LMU & Gene Center)



Cerebral Palsy

Emeritus Professor Alastair MacLennan AO

Uncovering the genetic causes of cerebral palsy via new generation sequencing technologies

Cerebral palsy is a neurodevelopmental disability affecting posture and movement control for 1 in every 500 children. This disability greatly affects quality of life for those affected and their families. Its prevalence has not changed during the past 50 years and costs Australia billions of dollars per year. Previously, it was incorrectly believed that most cases of cerebral palsy followed trauma and low oxygen levels around birth. Now epidemiological evidence shows that most of the neuropathology has its origins well before labour in pregnancy, or at conception.

The Australian Collaborative Cerebral Palsy Research group is investigating the contribution of genetic variants and epigenetic factors during fetal development and infancy in cerebral palsy causation.

The group have recruited almost 500 families with a cerebral palsy child to the Biobank, and are now focusing on the genetic analysis and interpretation of the data. We are using genomics (WES and WGS sequencing), transcriptomics (RNA sequencing), epigenetics and cell (primary neurons and stem cells) and animal modelling (zebrafish) to address the aetiology of this heterogenous group of disorders.

In 2017-18, the Cerebral Palsy Alliance will fund the collaboration with the epigenetics group at Murdoch Children's Research Institute to apply multi-omics to differentiate between the genetic and epigenetic components of cerebral palsy for 15 families enrolled with identical twins, where only one twin is affected.

Group Members

Research Leaders: Alastair MacLennan and Jozef Gecz

Postdoctoral Researchers: Mark Corbett and Clare van Eyk

Study Coordinator: Jesia Berry

Research Officer: Kelly Harper

Research Assistants: Mahalia Frank and Hannah Macdonald

Affiliate Members: Christopher Barnett, Eric Haan, James Rice, Ray Russo and Suzanna MacLennan

RRI Collaborator: Ben Mol

External Collaborators: Jeff Craig (Murdoch Children's Research Institute), Michael Kruer (University of Arizona), Mathew Bainbridge and Richard Gibbs (Baylor College) and Daniel Geschwind (UCLA & UCSF)



Evidence Based Women's Health Care

Professor Ben Mol

Evaluation of the effectiveness of health care for women and implementation of best practice

Medical procedures around the world are often conducted without evidence that interventions are beneficial to the patient and will not cause harm. This is unfortunately common, and such practices may have been conducted for years, or even decades, with limited questioning as to the effectiveness of treatments.

The Evidence Based Women's Health Care group believes all medical interventions require an underlying knowledge base demonstrating treatments are expected to do more good than harm. The group aims to provide insight on the effectiveness of all medical interventions in reproductive health, ideally through large international collaborations in randomised clinical trials, to provide insight on the available evidence tailored to the individual patient for both patients and doctors.

In 2016, our research findings which challenged current practice included:

- > The finding that a single fasting plasma glucose measurement, rather than a serial measurement, can predict whether women are at increased risk of having a large for gestational age baby when testing for gestational diabetes
- > Demonstration that a 6-month structured intervention program to facilitate weight loss preceding infertility treatment, did not improve rates of vaginal birth of healthy singletons at term during 24 months of follow-up
- > Demonstration that induction of labour with oral misoprostol versus a balloon catheter are equivalent in safety and effectiveness
- > Reports that routine hysteroscopy does not improve livebirth rates in infertile women with a normal transvaginal ultrasound of the uterine cavity scheduled for a first IVF treatment

Group Members

Research Leader: Ben Mol

Research Fellows: Sean O'Leary and Clarabelle Pham

Research Coordinator: Suzette Coat

Clinical Researchers: Shuo Huang

PhD Candidate: Rui Wang and Moustafa Abdelhafez Gadalla

RRI Collaborators: Caroline Crowther, Michael Davies, Gus Dekker, Jodie Dodd, Bill Hague, Louise Hull, John Lynch, Michelle Lane, Helen Marshall, Vivienne Moore, Rob Norman, Martin Oehler, Julie Owens, Claire Roberts, Sarah Robertson, Michael Stark and Jeremy Thompson

External Collaborators: Siladitya Bhattacharya (University of Aberdeen), Arri Coomarasamy (University of Birmingham), Tony Duan (Shanghai Tongji University), Bill Grobman (Northwestern University), Justus Hofmeyr (University of Witwatersrand), Rodolfo Pacagnella (University of Campinas), Shakila Thangaratinam (Blizard Institute), Homan Tuong (Vietnam National University), Jie Qiao (University of Beijing) and Xiaoke Wu (Heilongjiang University of Chinese Medicine).

Placental Development



Professor Claire Roberts and Professor Gus Dekker

Implementing screening tests for women in early pregnancy to alleviate major complications of pregnancy

The four main complications of pregnancy - preeclampsia, preterm birth, intrauterine growth restriction and gestational diabetes - affect 1 in 4 first pregnancies and are life threatening to the mother and/or baby in up to 6% of pregnancies. Globally more than 300,000 women die each year from complications of pregnancy and childbirth, with 99% of these in developing nations. Additionally, there are 15 million preterm births annually and this is considered the greatest factor contributing to the 6 million children who die before their 5th birthday. There are currently no screening tools in clinical practice to identify pregnant women at risk, largely because of a poor understanding of the pathogenesis of pregnancy complications and the complex inter-relationships in causal factors.

The Placental Development group have established several pregnancy cohorts, assembling large databases and biobanks, with their current research focused on: the molecular profile of the placenta across gestation at the genome and epigenome levels; identifying molecular profiles in maternal blood that reflect placental health; molecular mechanisms by which fetal sex impacts pregnancy outcome; and how maternal micronutrient status impacts placental function and pregnancy outcome. In 2016 after a decade of research and development, the group filed a PCT on their algorithms that predict risk for pregnancy complications. The patent was licensed by Karygen Health, and together we are progressing a screening test for use in the antenatal clinic. Our molecular expertise together with our knowledge of the placenta and pregnancy underpinned the award of a NIH NICHD Human Placenta Project Grant in late 2016.

Group Members

Research Leaders: Claire Roberts and Gus Dekker

Research Fellow: Tina Bianco-Miotto

Postdoctoral Researchers: Prabha Andrawera, Jessica Grieger, Amanda Hight, Tanja Jankovic-Karasoulos, Jessica Phillips, Shalem Leemaqz and Dale McAninch

Visiting Scientist: Gabriela Leghi

Visiting PhD Candidate & Clinical Research Assistant: Petra Verburg

Research Assistant: Dylan McCullough

Research Midwives: Julia Dalton, Samantha Pahl and Maria Viscione

PhD Candidates: Julia Dalton, Benjamin Mayne, Dee McCormack and Rebecca Wilson

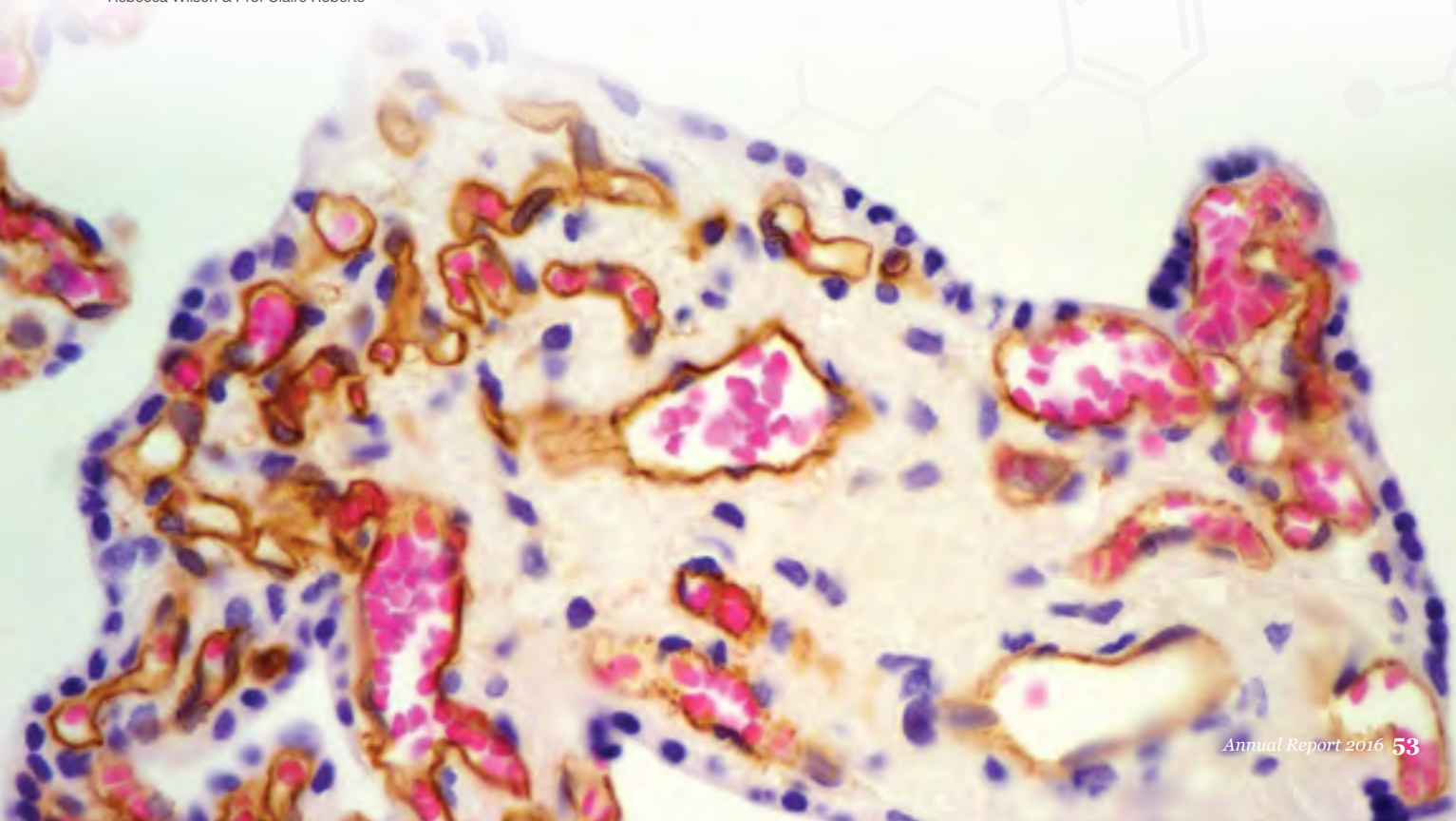
Technical Officer: Caitlin McCullough

Honours Students: Emma McBean, Michelle Plummer and Alexandra Samantha

RRI Collaborators: John Lynch, Helen Marshall, Ben Mol, Michael Sawyer and Sarah Robertson

External Collaborators: Louise Kenny (University College Cork), Lesley McCowan (University of Auckland) and Alicia Smith (Emory University)

Human placental villous stained to highlight the fetal endothelial cells (CD31, brown) and counter-stained with hematoxylin and eosin. Rebecca Wilson & Prof Claire Roberts





Life Course and Intergenerational Health (LIGHT)

Professor Michael Davies and Professor Vivienne Moore

Uncovering how inequalities in the health of women and their children arise through social and biological pathways, and identifying opportunities for change

The United Nation's Sustainable Development Goals seek to improve the lives of people worldwide. Our research program draws together three of the UN's goals: Ensure healthy lives and promote wellbeing for all at all ages; Achieve gender equality and empower all women and girls; and Reduce inequality within and among countries. Within these domains, we investigate biological and social determinants of health and wellbeing that have immediate consequences as well as enduring legacies. The LIGHT group characterises and explores the health of women in a range of circumstances; for example, women living in disadvantage or belonging to minority groups, those undertaking shiftwork, and those with health conditions of obesity, polycystic ovary syndrome or subfertility. We investigate the biological and social determinants of poor health in women and the implications for their lives and identity, as well as the health of children in the next generation.

In 2016, our work program included a review of the international literature on night shiftwork undertaken by women and influences on reproductive health, specifically difficulty conceiving and miscarriage. Preliminary evidence suggests that night shift work may give rise to menstrual cycle disturbances and could contribute to endometriosis. We investigated the health of the surviving twin when one of the pair dies in early gestation (6-8 weeks) within a large group of mothers who conceived with assisted reproductive technologies. We found that the surviving twin had an increased risk of major congenital malformations, providing another reason for single embryo transfer to be promoted worldwide as best practice.

Group Members

Research Leaders: Michael Davies and Vivienne Moore

Teaching and research academic: Lynne Giles

ARC Future Fellow: Megan Warin

NHMRC Career Development Fellow: Alice Rumbold

Senior Postdoctoral Researchers: Wendy March, Arusyak Sevoyan, Melissa Whitrow and Tanya Zivkovic

Postdoctoral Researchers: Stephanie Champion and Zohra Lassi

Statisticians: Chris Davies and Kristyn Willson

PhD Candidates: Ashlee Borqvist, Lucy Farrell, Renae Fernandez and Anna Roesler

RRI Collaborators: Hannah Brown, Jodie Dodd, Kathy Gatford, Philippa Middleton, Rob Norman, Darryl Russell and Tamara Varcoe

External Collaborators: Kurt Barnhart (University of Pennsylvania), Siladitya Bhattacharya (University of Aberdeen), Bianca de Stavola (London School of Hygiene and Tropical Medicine), Dmitry Kissin (Centers for Disease Control and Prevention), Jennifer Marino (University of Melbourne) Lisa Moran and Helena Teede (Monash University) and Stanley Uljaszek (University of Oxford)



Perinatal Health and Child Development

Dr Nicolette Hodyl

Improving health outcomes for mothers and babies by providing them with the best start to life.

Poor health during pregnancy and in early life is associated with impaired child neuro-development, affecting both cognitive and psychosocial health. This can lead to reduced academic achievement and labour market success, as well as negative health behaviours, and difficulties with interpersonal relationships across the life course. The risk for these poor outcomes is strongly linked with socio-economic disadvantage. Intervening to reverse the negative impact of these exposures requires early identification of "at risk" children. The Perinatal Health and Child Development group seeks to identify and protect against the impact of adverse exposures in pregnancy and early life on both maternal health and child development. We work closely with clinicians to integrate clinical, epidemiological and basic science measures to understand

mechanisms and identify early indicators that precede poor outcomes. Ultimately this will facilitate early interventions that improve child health.

In 2016 we commenced a randomised controlled trial comparing two doses of iron for pregnant women with iron deficiency or anemia to assess iron status, maternal psychosocial health and birth outcomes. In collaboration with Prof Claire Roberts, we commenced a follow-up study of ten year old children of mothers involved in the SCOPE birth cohort.

In the Women's and Children's Neonatal Unit, we recruited neonates who required a blood transfusion to compare the efficacy of a new washed blood product. This study incorporates a basic science component

to understand the mechanisms leading to poor outcomes, including the measurement of inflammatory and endothelial activation biomarkers.

Group Members

Research Leader: Nicolette Hodyl

PhD Candidates: Natalie Aboustate, Rebecca Collins, Amy Garrett, Amy Keir and Tara Crawford

Masters Students: Megan Bater, Tijana Gajic and Kathryn Martinello

Affiliate Member: Bernd Froessler

RRI Collaborators: Chad Andersen, Julia Pitcher, Michael Ridding, Claire Roberts and Michael Stark

External Collaborators: Angela Clow (University of Westminster), Andrew Lawrence (SA Pathology), Oliver Schubert (Lyell McEwin Hospital) and David Torpy (Royal Adelaide Hospital).

Early Origins of Health and Disease



Dr Kathryn Gatford and Professor Julie Owens

Understanding the mechanisms underlying the early origins of health and disease and testing interventions

The early environment, before and shortly after birth, influences an individual's risk of developing major non-communicable diseases including diabetes, cardiovascular disease, impaired neurological function and allergy. Importantly, the effects of adverse prenatal exposures are not always permanent or irreversible, opening the way for interventions during in early life to improve outcomes.

The Early Origins of Health and Disease group seeks to optimise the life-long health of the next generation by understanding how early life exposures cause long-term changes in health. We are developing interventions to reduce the risk of non-communicable disease with two main approaches; developing and assessing interventions during pregnancy and postnatal life to improve outcomes after an adverse early life

exposure; and developing interventions to improve placental development and function that will reduce the risk of a fetus being subjected to a restricted in utero environment or preterm birth.

In 2016 we evaluated the metabolic benefits of exercise training in adulthood, after intrauterine growth restriction (IUGR). Before training, IUGR progeny were similarly or more active than control progeny, suggesting that poorer metabolic control after IUGR is unlikely to be due to being more sedentary. We found that adult exercise training did not give the same benefits for glucose control and insulin sensitivity in IUGR adults as it did in normal individuals. This suggests that exercise interventions may need to be provided earlier in life to "reset" the individual and improve adult metabolic health.

Group Members

Research Leaders: Kathryn Gatford and Julie Owens

Emeritus Professor: Jeffrey Robinson

PhD Candidates: Patricia Grant, Dane Horton, Hong Liu and Amy Woolldridge

RRI Collaborators: Jodie Dodd, Stefan Hiendleder, Karen Kind, Julia Pitcher and Claire Roberts

Key Collaborators: Robert Bischof and Jane Black (Monash University), Vicki Clifton (Mater Medical Research Institute), Karen Kind and Beverly Muhlhausler (University of Adelaide), Debbie Lawlor, Glenn McConell (Victoria University), Margaret Morris (University of NSW), Tim Moss (Hudson Institute of Medical Research), Caroline Relton (Newcastle University) and Rebecca Simmons (University of Pennsylvania)

Circadian Physiology



Professor David Kennaway

Understanding how circadian rhythms regulate metabolism, reproduction and fetal programming of adult disease

Circadian rhythms regulate sleep, metabolism and reproduction, and can be disrupted by shift work, jet lag, advanced or delayed sleep wake syndrome and non-24 hour sleep-wake disorder. Shift workers are at greater risk of obesity, diabetes and metabolic syndrome, and there is emerging evidence to suggest shift work impacts upon fertility and pregnancy outcomes, where the long-term impact upon the developing fetus is unknown. This is of concern given that 16% of all Australian workers, including 140,000 women of reproductive age, undertake shift work.

The Circadian Physiology group aims to understand the impact of circadian rhythm disruption, before and during pregnancy, on fertility, fetal development and the long-term metabolic health of offspring. We use

both rodent and large animal models for a mechanistic analysis of the impact of maternal circadian rhythm disruption upon the fetus at the stage of development most susceptible to disruption.

In 2016 in collaboration with Dr Kathy Gatford, we commenced assessing pregnancy outcomes and metabolic programming in sheep exposed to simulated shift work in utero. We exposed our first cohort of ewes to a simulated shift work protocol whereby the timing of light exposure, food access and activity is manipulated such that the sheep experience three 'night shifts' per week. We demonstrated that exposure to this protocol leads to disrupted behavioural, endocrine and molecular rhythmicity of the pregnant ewe. Studies are now underway to assess the impact from birth through to young adulthood.

Group Members

Research Leader: David Kennaway

Research Fellow: Tamara Varcoe

Research Officers: Hong Liu and Mark Salkeld

RRI Collaborators: Michael Davies and Kathy Gatford

External Collaborators: Tim Kuchel (SAHMRI) and Glenn McConnell (Victoria University)



Genetic Epidemiology

Professor Lyle Palmer

Investigating the epidemiology and genetic epidemiology of the origins of health and disease

The burden of disease in pregnancy, birth and childhood is increasing, both clinically and economically. In order to disentangle the complex genetic and environmental determinants of key phenotypes in early life and childhood, large-scale and comprehensive population-based resources are required.

The Genetic Epidemiology group seeks to understand the genetic and environmental determinants of complex disorders such as preterm birth, pre-eclampsia, growth in utero, and development over childhood (ie growth, lung function and blood pressure trajectory). We approach these questions from a life course epidemiological perspective. Our focus is on applying

multidisciplinary approaches using combined statistical, epidemiological, genetic, molecular, informatic and clinical disciplines to better understand and treat important diseases.

Highlights of the year in 2016 include; the publication of the first genome-wide association meta-analysis of blood pressure across infancy and childhood; and the acceptance of our first paper in precision radiology. Our focus in 2016 was to construct a population-based resources based upon SA-linked administrative data. This work progressed rapidly, and includes the creation of a genealogical resource to link SA families within the core SA data linkage holdings and an SA Twins Register.

Group Members

Research Leader: Lyle Palmer

Principal Scientist: Gustavo Carnerio

PhD Candidate: Luke Oakden-Rainer

Masters Student: Mel Rogers

RRI Collaborator: John Lynch

Key Collaborators: John Hopper (University of Melbourne) and Andrew Bradley (University of Queensland)



Neuromotor Plasticity and Development (NeuroPAD)

Professor Michael Ridding and Dr Julia Pitcher

Investigating how early life events affect the development of the human brain and its ability to learn and remember, and to recover from injury or illness

Experiences throughout life constantly shape and rewire the brain. This occurs through changing the strength of existing neural connections and developing new connections, and is known as neuroplasticity. Neuroplasticity underlies our ability to learn and remember new skills, to forget information, and to recover from injuries to the brain. While this ability is life-long, the brain is at its most plastic in fetal life and early childhood. This facilitates the rapid learning of our early development, but it also makes the brain more vulnerable to adverse experiences and injury in early life. During this time the brain is less able to adapt appropriately to experiences and reduces the ability to recover from injury in later life.

NeuroPAD seek to understand how experiences and injuries alter human brain motor and cognitive function throughout the lifespan, and to develop effective therapies and interventions to ameliorate the negative consequences.

During 2016 NeuroPAD conducted research on three major projects; examining changes in brain plasticity following ischemic stroke; uncovering whether preterm birth is associated with impairments in brain plasticity and function; and exploring several neurophysiological markers for detecting early cognitive impairment.

Group Members

Research Leaders: Michael Ridding and Julia Pitcher

Research Fellow: Mitchell Goldsworthy

Postdoctoral Researchers: Brenton Hordacre and Luke Schneider

Paediatric Neurologist: Nicholas Smith

Visiting Scientist: Zhimai Lyu

Research Officer: Joanne Collins

PhD Candidates: Rebecca Collins and Sam Darvishi

Research Assistants: Amy Garrett and Lynton Graetz

Honours Students: Jessica Martin, Samantha Newell, Olivia-Paris Quinn and Jago Van Dam

RRI Collaborators: Jodie Dodd, Bill Hague, Nicolette Hodyl and Michael Stark

External Collaborators: Angela Clow (University of Westminster), Paul Fitzgerald (Monash University), Lorimer Moseley (University of South Australia), John Rothwell (University College London) and Ulf Ziemann (University Tübingen)

Neonatal Medicine

Associate Professor Michael Stark

Ensuring life-long health for newborns born preterm



Early Origins
of Health

Events, illnesses and treatments in the newborn period can have a profound and long-term effect on growth, development and life-long health. Integrating clinical and basic science research projects is critical to advancing our understanding of the major morbidities that complicate preterm birth.

The Neonatal Medicine group integrates basic and clinical research to inform best practice and to ensure neonatal care provided within the Women's and Children's Hospital is world class. The group operates in a family-centred philosophy towards the care of the newborn infant, which has fast-tracked improvements in day-to-day care. Our research operates within four themes: oxygen physiology, neonatal nutrition, transfusion medicine and neurodevelopmental outcomes.

2016 saw the further development of our research program, particularly focusing on multi-disciplinary involvement and active engagement with major stakeholders. Our research streams continued to attract national and international attention with significant publications focusing on oxygen physiology and neonatal nutrition with SAHMRI.

Our neurodevelopmental research program continued to expand with successful partnerships established with Miracle Babies who are supporting work in our own nursery aimed at improving outcomes in those born preterm through targeted parental involvement, and with the Department of Education and Independent Schools organisations focusing on a Reggio Emilia philosophy to the care of the family as a whole.

Group Members

Research Leader: Michael Stark

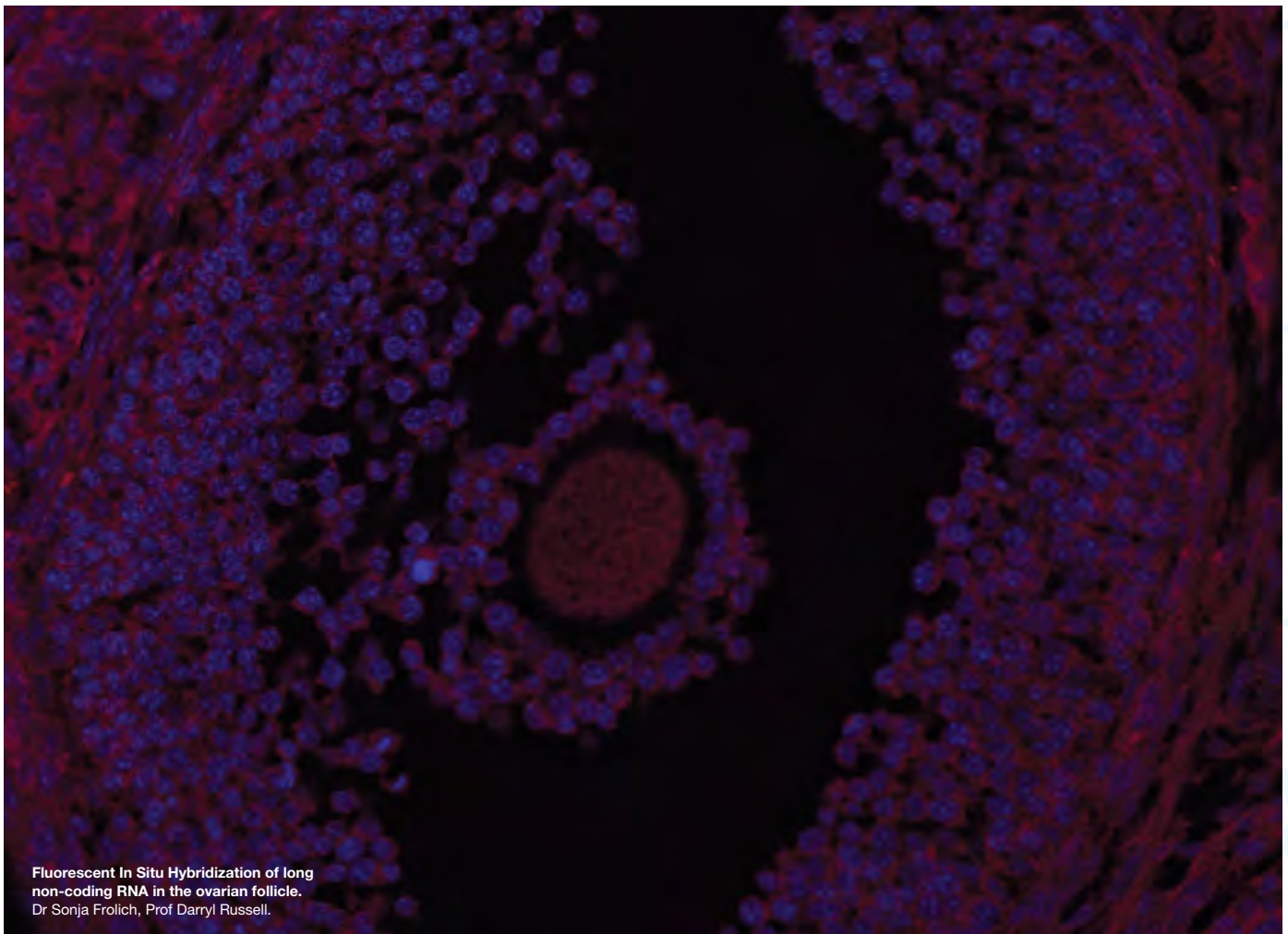
Clinical Partners: Chad Andersen and Andrew McPhee

Consultant Neonatologist: Amy Keir

Masters Students: Megan Bater and Kathryn Martinello

PhD Candidates: Natalie Aboustate and Tara Crawford

RRI Collaborators: Jodie Dodd, Nicolette Hodyl, Ben Mol and Claire Roberts



Fluorescent In Situ Hybridization of long non-coding RNA in the ovarian follicle.
Dr Sonja Frolich, Prof Darryl Russell.



Molecular Immunology

Associate Professor Simon Barry

Understanding the molecular basis for immune tolerance

How does a healthy immune system balance a swift response to fight-off pathogens, with maintaining tolerance to harmless challenges such as food, normal body tissues, and the fertilised egg in pregnancy? A rare but vital subset of immune cells known as regulatory T cells (Tregs) is believed to play a critical role. Tregs are essential for immune tolerance, and Treg defects are implicated in autoimmune disorders, infertility and pregnancy disorders, cancer and other diseases.

The Molecular Immunology group conducts research to understand and characterise Tregs under normal conditions, with a view to understanding what goes wrong with these cells in immunological disorders. We have launched a new initiative to map all of the genetic risk of autoimmune disease to the genes that are dysregulated using Chromatin Conformation Capture. This approach is used because the majority of the genetic variation in these diseases is

in noncoding regulatory regions, and the targets of these regions cannot be predicted by bioinformatics alone. Understanding the impact of these alterations will inform new therapies to correct defects, including immunotherapy.

As part of a biomarker discovery program we have identified a novel biomarker on human Treg cells, named PI16, and we are currently testing its ability to identify stable Tregs, or to be utilised as a diagnostic tool for loss of Treg function in disease. We are developing a PI16 Treg cell therapy that could be administered to patients to reset or redirect the immune system to prevent autoimmune disease, to promote tolerance to pregnancy, or to prevent transplant rejection.

Group Members

Research Leader: Simon Barry

Postdoctoral Research Fellows: Veronika Bandara, Cheryl Brown, Christopher Hope and Timothy Sadlon

Research Assistant: Batjargal Gundsambuu

Technical Officer: Sylvia Nobbs

PhD Candidates: Kristen Malatesta, Vincent Wong and Ying Ying Wong

Honours Student: Nicole Craig

Affiliate Member: Stephen Pederson

RRI Collaborators: Jennifer Couper, Wendy Ingman, Sarah Robertson and Darryl Russell

External Collaborators: Marc Beyer and Joachim Schultze (LIMES, Bonn), Dan Campbell and Thomas Duhon (Benorya), Greg Goodall (Centre for Cancer Biology), Randall Grose (SAHMRI), Giovanna Lombardi and Tim Tree (King's College London), Kellie MacDonald (QIMR), Raymond Steptoe (Diamantia Institute) and Kathryn Wood (Oxford University)



Transplantation

Professor Toby Coates

Generation of novel beta cell replacement therapy to treat type 1 diabetes

Type 1 diabetes is a major cause of morbidity and mortality in young Australians. It is caused by autoimmune destruction of the pancreatic beta cells, the only insulin secreting cell type in the body.

The Transplantation group performs clinical islet cell transplantation as a part of South Australia's only Nationally Funded Centre for Islet Cell Transplantation. This is currently the only treatment option for type 1 diabetes with hypoglycemic unawareness. In the laboratory we investigate new sources of insulin-secreting tissue for transplantation as well as novel ways to protect transplanted pancreatic beta cells from destruction by the immune system. This involves 3D printing, material science and use of specialized endothelial progenitor cells (EPC) and T regulatory cells.

During 2016 we generated insulin-secreting tissue from porcine embryonic stem cells with collaborators. This is a potentially exciting infinite source of beta cells for transplantation and the treatment of type 1 diabetes. Defined differentiation protocols have been developed and the resulting cells characterised for their insulin-secretion capacity. The group also continued work on novel means to alter the immune system and protect pancreatic beta cells by exploring the IGF-II pathway and transducing pancreatic beta cells with programmed death ligand-2 (PDL-2), a T cell death ligand which deletes both allo-reactive and auto-reactive T cells.

Group Members

Research Leader: Toby Coates

Principal Medical Scientist: Christopher Drogemuller

Senior Medical Scientist: Svjetlana Kireta

Senior Postdoctoral Researchers: Darling Rojas-Canales and Plinio Hurtado

Senior Scientists: Jodie Nitschke and Danielle Penko

Clinical Researchers: Rob Carroll, Shilpa Jesudason and Chen Au Peh

Technical Officer: Julie Johnston

PhD Candidates: Ernesto Hurtado Perez, Francis Kette, Bron Lett, Sebastian Stead and Kisha Sivanathan

Masters Students: Kyung Kang and Juewan Kim

RRI Collaborator: Mark Nottle

External Collaborators: Shane Grey (Garvan Institute of Medical Research) and Claudine Bonder (University of South Australia)



Professor Jennifer Couper

Preventing type 1 diabetes and its complications

The incidence of type 1 diabetes in childhood has increased worldwide, doubling in Australia over the last 20 years; suggesting the modern changing environment plays a role in type 1 diabetes. The specific environmental factors that contribute to and protect against type 1 diabetes are unknown, although it is likely that exposures in pregnancy and very early life are critical.

The Diabetes group conducts clinical and laboratory research focusing on:

- > Environmental exposures that drive diabetes
- > Immune regulatory function
- > The protection of blood vessel health in children and adolescents

Our type 1 diabetes clinic is part of the Australian JDRF register with 697 SA patients being part of this national effort to monitor the health of these children over time. We have ongoing input into international guidelines for the management of type 1 diabetes in children.

In 2016, the ENDIA pregnancy to birth cohort produced the first results on the microbiome/virome/nutrition during gestation. Additionally, we completed studies

of the benefits of metformin in children with type 1 diabetes who are overweight, and the impact of daily activity and dietary sodium on blood vessel health.

In 2017 we aim to: continue to discover the best medications to prevent blood vessel and renal disease in individuals with type 1 diabetes; lead and recruit into the ENDIA cohort study; reveal interactions between the immune system and the gut that drives type 1 diabetes; and develop new insulin pumps.

Group Members

Research Leader: Jennifer Couper

Clinical Academic – Paediatric Endocrinologist: Alexia Peña

Adolescent Physician: Jemma Anderson

Post-Doctoral Research Fellow: Oana Maftai

Clinical Pharmacist: Catherine Leggett

Paediatric Sonographer: Roger Gent

Centre of Research Excellence Project Manager: Megan Penno

ENDIA Study Project Manager: Rebecca Thomson

Clinical Researcher: Priya Augustine

Clinical Research Recruitment Coordinator: Kelly McGorm

Research Officers: Roger Gent and Christopher Hope

Research Nurses: Sarah Beresford, Meredith Krieg, Alison Gwiazdzinski and Danielle Edwards

Paediatric Phlebotomist: Ben Ramoso

Research Dietitians: Sarah Toome and Rachel Battersby

PhD Candidate: Jessica Phillips

Masters Student: Myf Geyer

RRI Collaborators: Simon Barry, Jodie Dodd and Lynne Giles

External Collaborators: National: Fergus Cameron (Royal Children's Hospital), Peter Colman (Royal Melbourne Hospital), Maria Craig and Kim Donaghue (University of Sydney), Elizabeth Davis, Tim Jones and Aveni Haynes (Telethon Kid's Institute), Grant Morahan (Harry Perkins Institute), Mark Harris (University of Queensland), Len Harrison, Tony Papenfuss and John Wentworth (Walter and Eliza Hall Institute), Michael Horowitz and Chris Rayner (Royal Adelaide Hospital), Bill Rawlinson (University of New South Wales), Peter Vuillermin (Barwon Health), Richard Sinnott (University of Melbourne) and Maria Makrides (SAHMRI). International: Joe Petrosino (Baylor College of Medicine), Jayne Danska (Sick Kids Toronto), David Dunger (University of Cambridge) and Matthew Doogue (University of Otago).



Developmental & Genetic Immunology

Professor Antonio Ferrante

Cellular signalling pathways in childhood allergy and inflammatory disorders

Children afflicted with autoimmune and inflammatory diseases experience life-long pain and disability. A powerful approach in the prevention and management of inflammatory reactions is to target the intercellular and intracellular communication signals that dictate aggressive cellular behaviour in the tissues of patients with disorders such as allergy, juvenile arthritis, diabetes and cystic fibrosis.

The Developmental and Genetic Immunology group aims to identify signalling molecules that regulate immune cellular functions in inflammation. We seek to categorise the interactive network between the intercellular signalling inflammatory mediators, their receptors and the intracellular signalling pathways, which control the initiation, manifestation and resolution of the inflammatory disease.

Our 2016 research on the intricacies of T cell maturation during the neonatal period and allergy development in children, has established a basis for T cell deficiency as a physiological immaturity of the neonate with plasticity for healthy development through an environmental/nutritional influence on T cell development from an immature Th2 cytokine profile to a mature Th1 profile. We identified that PKCzeta is a key signalling molecule regulating this development which is fine-tuned by nutrients operating via an epigenetic mechanism. This immaturity of the PKCzeta expression in neonates ensures phenotypic plasticity during early immune development but also provides a window of opportunity to intervene in a child's life for healthy outcome.

Group Members

Research Leader: Tony Ferrante

Senior Scientists: Alex Quach and Nick Gorgani

Principal Scientist: Charles Hii

Clinical Researcher: Tatjana Banovic

Postdoctoral Researcher: Anthony Pollard

PhD Candidates: Marwah Basin Khlah, Jovanka King, Khalida Perveen and David Shields

Research Assistant: Annabelle Small

Masters Students: Yaaseen Mohamed, Hasmita Patel, Trishni Putty, Annabelle Yap and Xixi Zheng

Honours Student: Any Ngo

Trainees in Lab Medicine: Asmita Patel, Nikida Patel and Shannon Glowik

RRI Collaborators: Simon Barry, Jennifer Couper, Jozef Gecz and Declan Kennedy

External Collaborators: Catherine Abbott (Flinders University), Paul Anderson and Howard Morris (University of South Australia), Peter Hofmann and Susanna Proudman (University of Adelaide), Suresh Mahalingam (Griffith University), Susan Prescott (University of Western Australia) and Harald Renz (Phillips University Marburg)



Neurogenetics

Professor Jozef Gecz

Investigating the genetics and biology of human neurodevelopmental disabilities

Intellectual disability, epilepsy, autism and cerebral palsy are life-long neurodevelopmental disabilities which affect more than 4% of children. Precise diagnosis and the knowledge of the underlying disease mechanisms are the first steps towards better management and future treatment for these disorders.

The Neurogenetics group seek to provide children living with neurodevelopmental disabilities precise molecular and clinical diagnosis to facilitate individualised health care. As part of this effort we identify novel genetic and biological determinants of normal development. We study our patient genomes using latest genomic technologies to pinpoint the responsible driver mutations in known or novel genes. Once identified we study these mutations using sophisticated stem cell and neuron models as well as small animal models.

In 2016 we identified several novel genes crucial for normal human brain development, including KCNA2 in episodic ataxia and pharmacoresponsive epilepsy; CLCN4 in syndromic intellectual disability, altered behaviours and seizure disorders in males and females; POGZ in intellectual disability and autism or USP9X in females with developmental delay and congenital malformations. After 25 years of investigations we resolved a large Australian family with more than 120 individuals, 23 of these affected with mild intellectual disability, through the identification of a non-coding regulatory mutation in a synaptic protein DLG3.

In 2017 we will harvest our established genome editing technologies to manipulate pluripotent stem cells, human or mouse, to be able to model identified human disorder mutations.

Group Members

Research Leader: Jozef Gecz

Postdoctoral Fellows: Lachlan Jolly and Mark Corbett

Research Officers: Atma Ivancevic, Duyan Pham and Raman Sharma

Research Assistants: Renee Carroll, Alison Gardner, Brett Johnson Marie Shaw, Renee Schulz and Annie Sun

PhD Candidates: Deepti Domingo, Claire Homan, Kirsty Kolc, Debrah Renders and Stanley Tan

Overseas Visitor: Sunita Koirala (Kathmandu, Nepal)

RRI Collaborators: Alastair MacLennan, Cheryl Shoubridge and Paul Thomas

External Collaborators: Sam Berkovic and Ingrid Scheffer (University of Melbourne), Evan Eichler (Washington University), Dan Geschwind and Miles Wilkinson (University of California, Los Angeles) and Vera Kelscheuer (Max Planck Institute)



Allergy and Vaccine Safety

Professor Michael Gold

Michael leads two research groups in the areas of allergy and vaccine safety

Child & Adolescent Health

Prevention and management of food allergy and allergic disease

In westernised and developed countries there is an evolving epidemic of allergic disease that primarily affects children under 5 years of age. Recent studies have shown that one in ten Australian children aged 12 months have an egg allergy - the highest documented rate in the world. The Allergy group's goal is to understand the immunological mechanisms associated with the prevention and management of food allergy (in particular egg allergy), and to understand the role of early-life egg exposure in the development of tolerance to egg.

During 2016 multiple trials were completed looking at early versus late introduction of egg into an infant's diet, the possible therapeutic benefits of heat-treated egg, and fish oil supplementation in pregnancy. The Starting Time for Egg Protein randomised controlled trial demonstrated that early introduction of egg does not prevent egg allergy and hence is different to peanuts where there is evidence to suggest early introduction can prevent peanut allergy. This evidence will now be translated into infant feeding advice and contribute to the international literature on this topic.

Improving monitoring of vaccine safety

When a new vaccine or seasonal flu vaccine is licensed for use, safety information about potential rare reactions is incomplete. The current system of surveillance for these events lacks the capability to detect these reactions in a timely way. The Vaccine Safety group aims to address the current deficiencies in surveillance by exploring health provider reporting, active sentinel surveillance and e-Health, including data linkage.

In 2016, a collaboration with the Global Vaccine Safety Team at the World Health Organisation continued, which included a project with the Adelaide Health Technology Assessment Team to complete systematic reviews on vaccine safety and the development of communication material for global dissemination. Current projects include linked data from the Australian Childhood Immunisation Register with the National Death Index and state-based morbidity data, and the development of an SMS-based real time surveillance system for all vaccines in all ages. Additionally, the group is collaborating on a number of studies including sentinel surveillance, examining convulsions after vaccination, and the association between food allergy and the pertussis vaccination.

Group Members

Research Leader: Michael Gold

Head of Discipline: Nigel Stocks

Senior Researcher: Annette Braunack-Mayer

Postdoctoral Research Fellow:

Merryn Netting

Affiliate Senior Lecturer: Karen Best

Research Coordinator: Gabriella Lincoln

Research Officer: Alexis Wheeler

Research Nurses: Christine Health and Mary Walker

PhD Candidate: Katherine Duszynski

RRI Collaborators: John Lynch and Helen Marshall

External Collaborators: Katie Allen and Mimi Tang (Murdoch Children's Research Institute), Madhava Balakrishna (World Health Organisation), Maria Makrides (SAHMRI), Priscilla Nyambayo (Medicines Control Authority of Zimbabwe), Nicole Pratt (University of South Australia) and Susan Prescott (Telethon Kid's Institute)



Critical and Ethical Mental Health

Professor Jon Jureidini

Promoting safe, effective and ethical research and practice in mental health

Misinformation about mental health and mental disorders misleads health professionals, the media, the public, and governments, jeopardising the rational allocation of billions of dollars of taxpayers' money every year.

There is clear evidence that:

- > Psychiatric research has been biased and misrepresented by pharmaceutical industry funding
- > Additional biases and misrepresentations have been used to support a range of vested interests
- > Social determinants of mental health have been neglected in favour of biological factors and individual characteristics
- > The voices of people who live with mental illness have been marginalised

The Critical and Ethical Mental Health group conducts research (particularly critical appraisal and meta-research), teaching, and advocacy in mental health, to promote safer, more effective, and more ethical research, policy and practice in mental health.

In 2016 we commenced research on antipsychotics prescribing to children and adolescents. We continued our work on citation distortion/misrepresentation, social determinants of mental health and suicide, and ethical issues related to the protection of participants in clinical trials. Additionally, we began a major project on workplace mental health.

In 2017 we plan to: undertake critical reviews of mortality associated with mental disorders and early intervention in mental health; and

develop typology and framework for analysis of citation content misrepresentation and conflict of interest in the health space.

Group Members

Research Leader: Jon Jureidini

Research Fellow: Anne Tonkin

Postdoctoral Fellow: Melissa Raven

PhD Candidate: Patricia O'Rourke

External Collaborators: Elia Abi-Jaoude (University of Toronto), David Healy and Joanna Le Noury (Bangor University), Barbara Mintzes (University of Sydney), John Nardo (Emory University), Patrick Russell (Royal Adelaide Hospital) and Catalin Tufanaru (University of Adelaide)



Sleep Disorders

Professor Declan Kennedy

Understanding the morbidity of sleep disorders and their effect on child development

Sleep disordered breathing in children is common, with as many as 10% of children reported to snore on a regular basis. The severity of sleep disordered breathing (SDB) ranges from primary snoring, to the more severe obstructive sleep apnea and a reduction in blood oxygen levels and increase in carbon dioxide profile. Even relatively mild condition has significant daytime effects on neurocognitive domains and behaviour.

The Sleep Disorders group seeks to understand the impact of poor sleep on the health of the developing child. Our multidisciplinary team of researchers primarily focuses on the effects of sleep disordered breathing on neurocognition, cardiovascular development, and immune, metabolic and nervous system function. We are also one

of the first groups to evaluate the effect that SDB has on the oral microbiota in children. Our strong collaboration with the University of Adelaide's, School of Dentistry has also allowed us to examine the contribution that dental/facial morphology plays in the onset of the disorder.

During 2016 the team focused on: assessing the effects SDB has on the physiology of the developing child, including evaluation of cardiovascular, autonomic nervous system and inflammatory response and changes in oral microbiota and dento/facial morphology; post-operative neurocognitive evaluation of children who had previously been assessed and treated with adenotonsillectomy; and recruiting participants into a multicentre study looking at the efficacy of adenotonsillectomy

treatment for SDB in young preschool children.

Group Members

Research Leader: Declan Kennedy

Co-Research Leaders: Kurt Lushington and James Martin

Medical Scientist: Anna Kontos

Principal Scientist: Yvonne Pamula

Honours Student: Charmaine O'Reilly

RRI Collaborators: Jennifer Couper and Antonio Ferrante

External Collaborators: Mathias Baumert and Scott Willoughby (University of Adelaide), Roger Gent (Women's and Children's Hospital) and Quenten Schwarz (University of South Australia)



BetterStart

Professor John Lynch

Providing children with the best start in life

Health and developmental gaps appear early in life, with significant variability between children. To provide all children with the best start to life, early intervention is crucial to improve health and developmental trajectory, especially for disadvantaged children.

The BetterStart Child Health and Development group aims to understand how genetic, social and environmental factors interact to enhance children's physical, mental, social and emotional health, and their cognitive ability and academic achievement. Our focus is on interventional epidemiology spanning health and development from the perinatal period into adolescence.

Our research in 2016 spanned data-linkage studies of perinatal factors and

learning outcomes, and child protection. Observational research included the importance of quality child care, the role of self-regulatory abilities on academic achievement, using contrasting study designs to improve causal inference, and the prediction of poor child development from routinely collected perinatal data.

Our newly funded NHMRC CRE *EMPOWER: Health systems, adversity and child well-being* will spearhead development of several pragmatic randomised controlled trials, and with core funding from the SA Department of Premier and Cabinet, we will build even greater capacity in data linkage and routine cost-effective evaluation of health, care and education services for children.

Group Members

Research Leader: John Lynch

Postdoctoral Researchers: Catherine Chittleborough, Angela Gialamas, Janet Grant, Luke Grzeskowiak, Dandara Haag, Murthy Mittinty, Alicia Montgomerie, Rhiannon Pilkington, Alyssa Sawyer, Helena Schuch and Lisa Smithers

Affiliates: David Gonzalez-Chica, Amelia Maika and Anna Pearce

RRI Collaborators: Gus Dekker, Nicki Hodyl, Ben Mol, Claire Roberts and Michael Sawyer

External Collaborators: Aluiso Barros (University of Pelotas), Deborah Cobb-Clark and Stefi Schurer (University of Sydney), George Davey Smith and Neil Davies (University of Bristol), Pernille Due (Danish National Public Health Institute), Steve Guthridge (Northern Territory Government), Louisa Jorm, Kathleen Falster (University of NSW), Tony Blakely (University of Otago), Catherine Law, Russell Viner (Institute of Child Health) and Sven Silburn (Menzies Institute)



Vaccines and Infectious Diseases

Professor Helen Marshall

Optimising protection for babies, children and pregnant women against serious infectious diseases through improved immunisation strategies

Infections such as whooping cough, meningococcal disease and influenza still cause death and disability in young infants. One in 10 children who are diagnosed with meningococcal disease will die from the infection and a further 40% will live with a life-long disability.

The Vaccines and Infectious Disease group aims to improve protection and outcomes for children from these serious infections. We investigate and measure the dual benefit of immunisations; protection for the individual as well as protection for the community through herd immunity. Additionally, we are particularly interested in maternal immunisations; by immunising pregnant women, we provide protection not only for the mother, but also for her newborn who is too young to be immunised and is at increased risk of serious complications from infections.

In 2016, we secured funding for the BPartOfIt study, which will enroll up to 60,000 years 10,11 and 12 high school students in SA, to assess the impact of the Meningococcal B vaccine on carriage of the meningococcus bacteria in adolescents. The results of this study will be used to inform MenB vaccine policy in Australia and internationally.

Group Members

Research Leader: Helen Marshall

Clinical Researchers: Sue Evans and Suja Mathew

Research Project Managers: Chris Heath, Michelle Clarke, Su-san Lee and Mark McMillan

Research Coordinators: Louise Goodchild, Kathryn Riley, Jane Tuckerman and Mary Walker

Paediatric Trainees: Alex Gordon and Marianne Yanni

PhD Candidate: Bing Wang

Honours Students: Hasseen Mohammed and Shugfa Noor

Affiliate Members: Christina Boros and Nan Vasilunas

RRI Collaborators: Simon Barry, Gus Dekker, Jodie Dodd, Lynn Giles, Mike Gold, John Lynch, Andy McPhee, Ben Mol, Alexia Pena, Claire Roberts and Michael Stark

External Collaborators: Ross Andrews (Menzies Research Institute), Hossein Afzali and Annette Braunack-Mayer (University of Adelaide), Ray Borrow (Public Health England), Jim Buttery and Terry Nolan (University of Melbourne), Margie Danchin (Murdoch Children's Research Centre), Adam Finn (University of Bristol), Ann Koehler (SA Health), Stephen Lambert (Queensland Children's Medical Research Institute), Andrew Lawrence (SA Pathology), David Lynn and Steve Wesselingh (SAHMRI), Kristine Macartney, Peter McIntyre and Robert Bony (University of Sydney), Martin Maiden, Jenny McLennan, Andy Pollard and Matthew Snape, (University of Oxford), Julie Ratcliffe (Flinders University), Peter Richmond (University of Western Australia) and Geraint Rogers (Flinders University and SAHMRI)



Cystic Fibrosis

Associate Professor David Parsons

Development of genetic therapies for treating and preventing cystic fibrosis and non-invasive measurements of their effect

Cystic fibrosis is a relatively common chronic illness that reduces quality of life, and typically limits lifespan to young adulthood. The disease is autosomal recessive and occurs when two faulty copies of a gene known as CFTR are inherited, one from each parent. Over 2,000 different CFTR mutations have now been identified. The CFTR defect affects many organs, but it is the lung disease that produces most of the mortality and morbidity.

The Cystic Fibrosis Airway Research group aims to develop an effective genetic therapy to prevent or cure cystic fibrosis airway disease. Research activities are focused on achieving effective lentiviral CFTR vector gene delivery, transducing airway stem cells in-situ to enable extended gene expression, upscaling our gene vector production techniques, optimising the gene vector, and developing new delivery methods. The

effectiveness of pharmaceutical and genetic therapies for cystic fibrosis is hard to quantify, so the group is also developing rapid and accurate X-ray imaging based outcome measures for assessment of airway disease, and to test the effectiveness of novel therapeutics including their gene therapy.

2016 saw the beginning of a 3-year NHMRC-funded project examining the effectiveness and persistence of lung gene transfer in live animals. We trialed a bioreactor system designed to boost gene vector production capabilities, to meet the needs of our gene transfer development projects. Using gene editing techniques we created CF-carrier rats that when bred should produce rats with the most common mutation found in humans, for testing gene therapy treatments of emerging or established CF lung disease.

Group Members

Research Leader: David Parsons

Senior Scientist: Martin Donnelley

Postdoctoral Researchers: Patricia Cmielewski, Nigel Farrow, Nathan Rout-Pitt and Chantelle McIntyre

PhD Candidates: Ryan Green, Alexandra McCarron and Harsha Padmanabhan

Masters Student: Dr Thomas Goddard

Administrative Assistant: Bernadette Boog

RRI Collaborators: Simon Barry, Mark Nottle and Paul Thomas

External Collaborators: Ivan Bertonecello and Jonathan McQualter (University of Melbourne), Ric Boucher and Rob Tarran (University of North Carolina), Andrea Fouras, Kaye Morgan and Karen Siu (Monash University), Albert Juhasz, Ivan Lee and Euan Smith (University of SA), Tim Kuchel (SAHMRI), Maria Limberis (University of Pennsylvania), Kentaro Uesugi (JSDTI), Naoto Yagi (JASRI) and Roger Yazbek (Flinders University)

Mouse blastocyst imaged using Apotome.
Macarena Gonzalez and A/Prof Rebecca Robker



Child and Adolescent Mental Health

Professor Michael Sawyer

Developing and evaluating new population-level interventions for the health and wellbeing of mothers and children

Optimal physical and mental health is important for strong and resilient communities. Unfortunately, many mothers and children experience sub-optimal health and wellbeing; 13% of new mothers experience significant symptoms of depression, while at any single point in time, 14% of children and adolescents experience mental health problems. What is concerning is the repeated finding that only a minority of those experiencing problems receive help from professional services. There is a strong requirement to develop new cost-effective interventions that will improve the health and wellbeing of mothers and their children in the general community.

The Child and Adolescent Mental Health group works closely with clinical staff in the community child health service in South

Australia to develop and evaluate new population-level interventions that have the potential to improve the health and wellbeing of the community. The effectiveness of interventions is assessed in clinical trials conducted as part of routine service delivery in the community child health service.

In 2016 we developed a new intervention (the eMums Plus program) that is designed to help mothers with mild to moderate depression and parenting problems. The program builds on our previous experience of combining the professional skills of community nurses and the capacity of the Internet to reach large numbers of mothers in the general community. During 2017 we will work in partnership with the Child and Family Health Service to pilot test this new program.

Group Members

Research Leader: Michael Sawyer

Senior Project Officer: Jennifer Clark

PhD Candidate: Amy Kaim

Research Assistant: Christy Reece

RRI Collaborators: John Lynch, Ben Mol and Claire Roberts



Intellectual Disability Research

Associate Professor Cheryl Shoubridge

Defining molecular and cellular pathways for intellectual disability and seizures, and developing effective interventions

Approximately 1 in 50 people worldwide suffer from intellectual disability, with the cost to Australia conservatively estimated at \$14 billion annually. Intellectual disability is described as significantly impaired cognitive functioning, coupled with a deficit in adaptive behaviour with onset before age of 18. Children with intellectual disability often experience other symptoms such as early onset and recurrent seizures.

The Intellectual Disability Research group seeks to understand the molecular mechanisms and impact of naturally occurring mutations in genes causing intellectual disability and seizures, with the aim of developing effective therapies to improve the quality of life for patients and their families. These genetic disorders individually are often considered rare, but collectively, contribute to a significant health burden for the community.

We have modelled several intellectual disability genes using cell-based investigations and mouse models to unravel the mechanisms that contribute to the clinical features we see in our patients. In 2016, we reported changes to genome wide gene expression in a mouse model to map the molecular pathways that are disturbed early in brain development; and successfully generated a mouse modelling the knock-out of an intellectual disability gene, one that causes phenotypes in boys and girls.

We are extending our investigations to establish the molecular targets and pathways that lead to improvements in seizure frequency; and will utilise our knock-out mouse model to evaluate the role of this intellectual disability gene in the normal development and the function of neurons in the brain.

Group Members

Research Leader: Cheryl Shoubridge

Postdoctoral Researchers: Matilda Jackson, Kristie Lee and Aneta Zysk

PhD Candidate: Tessa Mattiske

Honours Students: Oliver Dearsley and Laura Redpath

RRI Collaborators: Jozef Gecz and Claire Roberts

External Collaborators: Gaelle Friocourt (INSERM), Nigel Jones and Terance O'Brien (University of Melbourne) and Jeffrey Noebels (Baylor College of Medicine)

Investing in our members

To continue to be a world-leader in the areas of reproduction, pregnancy and child health research, the Institute invests in people, networks and facilities.

Core Facilities



Adelaide Research Assay Facility

Prof David Kennaway

The Adelaide Research Assay Facility (ARAF) provides specialised, high-throughput and

high-sensitivity assays of physiologically important analytes for academic researchers and commercial customers Australia-wide.

ARAF provide services and consultation for specialised measurements of analytes in human or animal biological fluids or cell culture / tissue extracts. These cover broad research areas including but not limited to endocrinology, neuroscience, physiology, immunology, pathology and cancer.

In 2016 the facility analysed plasma and saliva samples for 4 groups in the RRI, University of Adelaide researchers at Roseworthy, and groups at SARDI, UniSA, and Flinders, Melbourne, Monash and Sydney Universities.



Bioinformatics Facility

Dr Jimmy Breen

Bioinformatics enhances the Institute's capability in next-generation sequencing

and systems biology approaches to basic science and clinical research investigating human and animal reproduction and development. Strategies to design and analyse transcriptome, deep-sequencing, genome and proteome data sets are a powerful approach to generating fundamental knowledge on systems and processes in biology and disease.

Bioinformatic methods allows researchers to follow a complementary path in their research that promotes exploratory analysis and hypothesis generation, as well as focused analysis of previously identified targets of interest. This can provide stronger

and more clinically applicable results from a research program, and yield publication, funding, and patent outcome improvement.



Biostatistics Facility

Dr Emma Knight

The Biostatistics Facility provides expert advice in research design, statistical analysis and presentation of data.

This service complements researcher expertise through the provision of effective statistical analysis that delivers clear and precise answers to their questions.

In 2017, biostatistics will continue to be afforded to research leaders to improve the likelihood of securing future NHMRC grants and to provide general research design advice for continuing and new research projects.



Cohort and Intergenerational Studies Facility

Prof Claire Roberts

The Cohort and Intergenerational Studies (CIS) Facility underpins

the strategic utilisation of unique Adelaide generated longitudinal studies - both cohorts and randomised controlled trials - established before or at birth, or in childhood. CIS and its resources enhance collaborations, support novel interrogations of accrued data and enable pooling of studies. This will advance research to address complex challenges in reproductive and paediatric health, now and into the future.

CIS aims to align, maintain and enhance cohorts, databases and related resources, stimulate research that addresses prioritised complex challenges in reproductive and paediatric health, and increase participation in national and international consortia.



Gene Silencing and Expression Facility

Jason Gummow

The Gene Silencing and Expression (GSEx) Facility provides gene manipulation services

to Australian researchers in a fully equipped PC2 laboratory. The facility offers custom production of lentiviral, AAV and retroviral vectors, and stock viruses for purchase by the microlitre. In addition, customers can access CRISPR, non-viral vector and other cell and molecular biology services.

In 2016, GSEx increased production and has now produced over 150 viral vectors since the core was established. These viruses have been used to infect immortal cell lines and primary cell cultures. GSEx demonstrated the effectiveness of both lentivirus and AAV in mouse cumulus oocyte complexes and cancer cell lines in rodents and humans. Additionally, the facility demonstrated robust reporter expression following human T-cell infection.



SA Genome Editing Facility

Prof Paul Thomas

The SA Genome Editing (SAGE) Facility uses cutting edge genome editing technology to

generate mutant mice for a wide range of applications. Utilising new CRISPR/Cas9 system technology, the facility offer a number of services including generation of custom knock out, point mutation and tagged alleles.

SAGE's services are highly accessible offering a significantly reduced cost and fast turnaround compared to traditional ES cell methods - providing researchers an edge when applying for grants and publishing in high impact journals.



Dr Kylie Dunning &
Dr David Sharkey,
Career Development
Fellowship recipients

Since operations began in 2014, 13 mutant lines have been produced with another seven projects underway. In 2017 SAGE aims to grow its understanding of CRISPR/Cas9 and its variants, as well as expanding services on offer to include production of conditional alleles.

2016 Funding Programs

Engaging Opportunities

This newly created program seeks to support the development of new relationships with key stakeholders to jointly address research priorities; sharing identification and ownership of the problem being addressed, and the path to understanding and progressing a solution.

It has been recognised that collaboration with groups such as health consumers, clinicians, business, industry, government and not-for-profits will lead to more robust and relevant research projects, quicker development of solutions, and more effective translation of discoveries, than working independently as individual researchers. This program resulted in the development of 6 new partnerships with key stakeholders.

Investment for Success

This program aims to increase the Institute's NHMRC funding by developing highly competitive (but as yet unfunded) project grant applications, into more competitive applications for the next rounds submission.

The investment enables proof-of-concept studies, experiments or analysis, to ensure rapid publication of a pivotal paper or increase scientific quality, significance and innovation.

In 2016, 7 projects were included in this program, with two participants going on to achieve NHMRC project grant funding.

Career Development Fellowship

This fellowship funds the salary of 'Emerging Star' early career researchers for one year, supporting their career development to enable competitiveness for an NHMRC Career Development Fellowship or similar. In 2016 the fellowship was jointly awarded to:

- > **Dr David Sharkey** *Seminal fluid and immune adaptations for pregnancy in women*
- > **Dr Kylie Dunning** *Understanding how somatic cells of the ovarian follicle promote mammalian oocyte development*

Innovation Seed Funding

This pilot program supports early and mid-career researchers to collaborate across research groups and themes and to explore novel research questions. Its goal is to harness and progress new ideas towards competitive, fundable research that addresses significant knowledge gaps.

This program supported 7 collaborative projects in 2016, bringing together more than 40 members.

High Performance Researcher

Facilitated by an external specialist, this program seeks to up-skill early and mid-career researchers by providing them with the tools required to forge a successful career in research. This is achieved through a series of professional development workshops, and external support for the Institute's next generation of research leaders.

Exchange

The Exchange Program seeks to build collaborations with international researchers, with the aim of increasing research connections and capacity, and facilitating access to

international funding, databases and expertise.

This program funds Institute members to work with collaborators overseas, as well as funding international collaborators to spend time with the Institute in Adelaide.

Travel Grants

Supporting researchers to travel so they can present and share their research findings at national and international conferences and meetings is essential for research dissemination, career development and building a strong track record. Attendance at key conferences enables important networking with peers, and the opportunity to develop future collaborations.

In 2016 the Institute awarded \$31,000 to 33 members who took part in 19 conferences.

Visiting Speakers

The Visiting Speakers Program supports external research leaders to visit the Institute, and encourages collaboration between Institutions, providing insight and new perspectives on our research priorities.

Visitors present a seminar to members and meet with relevant researchers to discuss common research interests.

Mentoring

Each year the Institute runs a year-long mentoring program, matching senior researchers with early or mid-career researchers. This program seeks to strengthen networks, build relationships, develop career pathways and enhance resumes, providing mutual benefit for both the mentee and mentor.

2016 Success stories

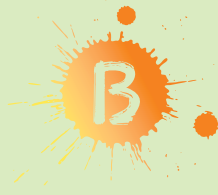
Our programs continued to deliver significant benefit, with particular noteworthy accomplishments including:

B Part of It

In 2016, Prof Helen Marshall received funds through the RRI Exchange Program to visit the UCL Institute of Child Health in London, to progress her collaborative research with Helen Bedford in the areas of immunisation, child health and meningitis. While in the UK on this exchange, Helen met with Glaxo Smith Kline and secured funding to run the B Part of It study in South Australia.

South Australia has the highest rate of the potentially life threatening Meningococcal B (Men B) disease in the country, with young adults aged 15-24 years being most at risk of carrying the virus. In partnership with SA Health, Helen initiated the largest Men B herd immunity study in the country, to establish whether when a significant proportion of a population is immunised against the disease, society can prevent the transmission of that disease from one person to another and protect those who are not immune.

Vaccinations in high school students in years 10, 11 and 12 will occur in the first half of 2017.



Successful NHMRC project grants

The RRI's Investment for Success program aims to increase the Institute's success in achieving NHMRC funding by developing highly competitive (but as-yet unfunded) project grant applications into more competitive applications for the next round of submissions.

In 2016 the following members received NHMRC grants for projects that were developed in this program:

- > **A/Prof Rebecca Robker** received \$1.5m for her research: *Re-energising the preimplantation embryo to extend lifetime health*
- > **Prof Simon Barry** received \$1m for his research: *Identification of the conformation dependant targets of autoimmune disease linked variation in human regulatory T cells.*



2016 Scholarships

Repromed Reproductive Health Scholarship



The Institute partnered with Repromed in 2016 to establish the Repromed Reproductive Health Scholarship. The inaugural recipient for this honours scholarship was **Joseph Femia**.

Joseph's interests in immunology, particularly where the immunological interplay can affect maternal health and pregnancy outcomes, is what steered him towards an honours year on the research project: *The Role of Stress-induced TRAIL on Peri-conception Programming in Offspring Health*.

His project investigated the role of an inflammatory embryotoxic cytokine, TNF-related apoptosis inducing ligand (TRAIL) in pregnancy, and how it alters embryo and fetal development.

"We began investigations into TRAIL's role on embryo development in vitro, using a new model. We also established knock-out mice strains for both TRAIL and its receptor, and analysed the breeding outcomes to observe if loss of TRAIL or its receptor affected pregnancy," said Joseph.

Additionally, Joseph generated preliminary in vivo data on the role of TRAIL in fetal development upon exposure to an inflammatory or stress stimulus.

"Our findings suggest that TRAIL may have a differential impact depending on sex, and now that the knockout breeding colonies are developed, this can be explored further," explained Joseph.

Stress response cytokines are elevated in many common inflammatory diseases, including diabetes, obesity and infection, all of which are linked with pregnancy disorders and health problems later in life for the offspring.

"The long term goal of research in this area is to understand the role of TRAIL in embryo and fetal development; this could lead to improved pre-conception planning and may open new opportunities to develop diagnostics and pharmaceuticals to improve infertility treatment options," explained Joseph.

Joseph is continuing in the path of a career in health and will commence a postgraduate medical degree in 2017.

"While I will undertake a medical degree, I am very much interested in pursuing research throughout my career. I am excited to know that my research findings are adding to the body of knowledge in this area and will have real applications in the future," said Joseph.

"I would like to thank Repromed, my supervisors, the Robertson and Brown labs and the Robinson Research Institute for this scholarship. The honours year is stressful and time consuming, and the financial support this scholarship provided me was invaluable," said Joseph.

Joseph's supervisors during his honours year were Prof Sarah Robertson, Dr Hannah Brown and A/Prof Jeremy Thompson.



Yasmyn Gordon

Jeffrey Robinson Honours Scholarship

In 2016, the Institute awarded the Jeffrey Robinson Honours Scholarship to **Yasmyn Gordon**.

During her undergraduate degree, Yasmyn's combination of genetics and biochemistry majors led to a keen interest in pre-implantation and early embryo development, and also in targeting cancers with unique characteristics to develop personalised treatments.

Yasmyn undertook an honours year working within A/Prof Darryl Russell's Ovarian and Reproductive Cancer group and A/Prof Rebecca Robker's Ovarian Cell Biology group, on the research project: *Measuring Mitochondrial Stress Responses in Cancer Cells*.

"We wanted to compare various aspects of mitochondrial respiration (aerobic energy production) in cancer cells utilising different pathways to maintain their immortality, and how

their respiration changed in response to stress and other treatments," explained Yasmyn.

Immortality is one of the defining hallmarks of cancer, as is their typically altered metabolism. These aspects are of great interest in cancer treatment, and cancer cells typically display an altered metabolism compared to 'normal' cells.

"My research looked at targeting the cancer cell's unique metabolism to disrupt their energy supply, in combination with targeting their mechanisms to maintain immortality. Together these present a great opportunity for targeted cancer treatments", said Yasmyn.

Yasmyn thoroughly enjoyed her honours year and her increasing independence in the lab through taking responsibility for her experiments.

"I loved being part of a research team and getting to know different people. I learnt many valuable things from my team both in and out of the lab," reflected Yasmyn.

"The year overall was full of new experiences

and challenges, but it really helped me grow as a scientist and a person."

Yasmyn plans on continuing her research and will commence a PhD in 2017 and can see a research in career in the future.

"Long term, I would love to lead a lab with a focus on reproductive health and pre-implantation embryo development", said Yasmyn.

Yasmyn's supervisors during her honours year were A/Prof Darryl Russell, A/Prof Rebecca Robker, Dr Sonja Frölich, and Dr Linda Wu.

Advisory Board



Prof Jock Findlay AO (Chair)



Prof Mike Brooks



Prof Alastair Burt



A/Prof Naomi Dwyer



Dr Susan Evans



Prof Julie Owens



Prof Sarah Robertson



Prof Andrew Zannettino

Early and Mid-Career Researcher Council



Dr Tina Bianco-Miotto



Dr Jimmy Breen



Dr Martin Donnelley



Dr Tod Fullston



Dr Megan Penno

Executive Committee



Prof Sarah Robertson
(Chair)



Prof Simon Barry



Prof Jenny Couper



Prof Jodie Dodd



Marcus Goddard



Prof Helen Marshall



Prof Claire Roberts



A/Prof Rebecca Robker



Prof Ray Rodgers



A/Prof Darryl Russell



A/Prof Michael Stark

Member list

Thank you to all of the Institute's members who have contributed to another successful year.

Members

Abdelhafez Gadalla, Moustafa	Cates, Lauren	Drechsel, Merle	Gordon, Alex	Jackson, Matilda	Lim, Megan
Aboutstate, Natalie	Champion, Stephanie	Drogemuller, Christopher	Gorgani, Nick	Jacob, Reuben	Lincoln, Gabriella
Anastasi, Marie	Chan, Hon Yeung	Dunning, Kylie	Grant, Pat	Jankovic-Karasoulos, Tanja	Liu, Hong
Andraweera, Prabha	Chaudhary, Rajesh	Duszynski, Katherine	Green, Ryan	Jennings, Staci	Liu, Bo
Archer, Maddison	Chechurova, Tanya	Earl, Rachel	Green, Ella	Jesudason, Shilpa	Lokman, Noor
Ashwood, Pat	Cheow, Tiffany	Estrella, Consuelo	Grey, Shane	Johnson, Brett	Louise, Jennie
Atashgaran, Vahid	Chin, Peck	Evans, Susan	Grieger, Jessica	Johnston, Julie	Lushington, Kurt
Augustine, Pyria	Chittleborough, Catherine	Evans, Sue	Groome, Holly	Jolly, Lachlan	Lynch, John
Awadalla, Maged	Clark, Jennifer	Ewens, Melissa	Grutzner, Frank	Jureidini, Jon	Lyu, Zhimai
Ball, Vincent	Clark, Rebekah	Fairclough, Ashlee	Grzeskowiak, Luke	Kaczmarek, Adrian	Macdonald, Hannah
Bandara, Veronika	Clarke, Michelle	Farrell, Lucy	Gundsambuu, Batjargal	Kaim, Amy	MacDonald Van Dam, Jago
Banovic, Tatijana	Omielewski, Patricia	Farrow, Nigel	Haag, Dandara	Kang, Kyung	MacLennan, Alastair
Barry, Simon	Coat, Suzette	Fatohi, Anwar	Hague, William	Kannieappan, Lavern	Macpherson, Anne
Basim Khalah, Marwah	Coates, Toby	Femia, Joseph	Haines, Bryan	Kedzior, Sophie	Malatesta, Kristen
Bastian, Nicole	Collins, Rebecca	Fernandez, Renae	Han, Shanshan	Keen, Erin	March, Wendy
Bater, Megan	Collins, Joanne	Ferrante, Antonio	Harper, Kelly	Keir, Amy	Marshall, Helen
Beresford, Sarah	Copping, Katrina	Fischer, Judith	Hartanti, Monica	Kelly, Jasmine	Martin, Jessica
Bermudez Gonzalez, Macarena	Corbett, Mark	Frank, Mahalia	Hatzirodos, Nicholas	Kennaway, David	Martin, James
Bernhardt, Sarah	Couper, Jennifer	Fraser, Louise	Heath, Christine	Kennedy, Declan	Martinello, Kathryn
Berry, Jesia	Craig, Nicole	Frolich, Sonja	Heilbronn, Leonie	Kette, Francis	Mathew, Suja
Best, Karen	Crawford, Tara	Fullston, Tod	Hiendleder, Stefan	Kieffer, Tom	Mattiske, Tessa
Bianco-Miotto, Tina	Crowther, Caroline	Gajic, Tijana	Highet, Amanda	Kim, Juewan	Mayne, Benjamin
Bonder, Claudine	Daish, Tasman	Gardner, Alison	Hii, Charles	Kind, Karen	McAninch, Dale
Bonner, Wendy	Dalton, Julia	Garrett, Amy	Ho, Rachel	King, Jovanka	McBean, Emma
Boog, Bernadette	Darvishi, Sam	Gatford, Kathryn	Hodson, Leigh	Kireta, Svjetlana	McCarron, Ali
Borqvist, Ash	Dasari, Pallave	Gebert, Jasmina	Hodyl, Nicolette	Knobbs, Sylvie	McCormack, Catherine
Braunack-Mayer, Annette	Dass Singh, Mansi	Gecz, Jozef	Homan, Claire	Kolc, Kristy	McCullough, Caitlin
Breed, William	Davies, Chris	Gent, Roger	Hope, Chris	Kontos, Anna	McCullough, Dylan
Breuer, Marie	Davies, Michael	Geyer, Myf	Hordacre, Brenton	Kortschak, Dan	McDowall, Melanie
Brown, Hannah	Dearsley, Oliver	Gialamas, Angela	Horton, Dane	Krieg, Meredith	McGorm, Kelly
Brown, Cheryl	Dekker, Gus	Giles, Lynne	Huang, Shuo	Lane, Michelle	McIlpatrick, Stephen
Camp, Amanda	Deussen, Andrea	Gillet, Ellen	Hull, Louise	Larson, Connor	McIntyre, Chantelle
Carneiro, Gustavo	Diener, Kerri	Glynn, Danielle	Hummitzsch, Katja	Lassi, Zohra	McLennan, Hanna
Carroll, Renee	Dinh, Doan Thao	Goddard, Thomas	Hurtado, Plinio	Lee, Eunice	McMillan, Mark
Carroll, Rob	Dodd, Jodie	Gold, Michael	Hurtado Perez, Ernesto	Lee, Su-san	McPherson, Nicole
Cash, Sarah	Domingo, Deepti	Goldsworthy, Mitchell	Hutchison, Amy	Leemaqz, Shalem	Mertens, Birte
	Donnelley, Martin	Goodchild, Louise	Ingman, Wendy	Leghi, Gabriela	Middleton, Philippa
	Dorian, Camilla	Gordon, Yasmyn	Ivancevic, Atma	Lett, Bron	Mildren, Kathryn

Millar, Kristina
Mitchell, Paula
Mittinty, Murthy
Moffat, Ruby
Mohamed, Yaaseen
Mohammed, Hassen
Mol, Ben
Moldenhauer,
Lachlan
Montgomerie, Alicia
Moore, Vivienne
Netting, Merryn
Newell, Samantha
Newman, Angela
Ngo, Andy
Nisenblat, Vicki
Nitschke, Jodie
Noor, Shugufa
Noor Din, Siti
Norman, Rob
Nottage, Casey
Nottle, Mark
O'Brien, Cecelia
O'Reily, Charmaine
O'Rourke, Patricia
Oakden-Rainer,
Luke
Oehler, Anita
Oehler, Martin
Owens, Julie
Padmanabhan,
Harsha
Pahl, Tessa
Pahl, Samantha
Paleolegos, Mary
Palmer, Lyle
Pamula, Yvonne
Panir, Kavita
Parsons, David
Patel, Nikida
Pederick, Daniel
Peh, Chen
Peirce, Eleanor
Penko, Daniella
Penn, Alexander
Penno, Megan
Perveen, Khalida

Pfitzner, Chandran
Pham, Clarabelle
Pham, Duyen
Phillips, Jessica
Pilkington, Rhiannon
Piltz, Sandie
Pitcher, Julia
Plummer, Michelle
Pollard, Anthony
Poprzecny, Amanda
Ptel, Asmita
Putty, Hasmita
Putty, Trishni
Quach, Alex
Quinn, Olivia-Paris
Raven, Melissa
Redpath, Laura
Reece, Christy
Regmi, Prashant
Ricciardelli, Carmela
Ridding, Michael
Riley, Kathryn
Ritter, Lesley
Roberts, Claire
Robertson, Louise
Robertson, Sarah
Robker, Rebecca
Rodgers, Raymond
Roesler, Anna
Rogers, Mel
Rogers, Kristie
Rojas-Canales,
Darling
Rout-Pitt, Nathan
Rumbold, Alice
Russell, Darryl
Sadlon, Timothy
Saini, Avishkar
Saini, Anmol
Salem, Rehana
Samantha,
Alexandra
Sandeman, Lauren
Sawyer, Alyssa
Sawyer, Michael
Schjenken, John
Schneider, Luke

Schuch, Helena
Sevoyan, Arusyak
Sharkey, David
Sharma, Raman
Shaw, Marie
Shehadeh, Helana
Shepherd, Emily
Sheppard, Caroline
Shields, David
Shoubridge, Cheryl
Shuaib, Entesar
Singh, Mansi
Sivanathan, Kisha
Small, Annabelle
Smithers, Lisa
Stark, Michael
Stevens, David
Stocks, Nigel
Sun, Sally
Sun, Annie
Sundernathan, Tulika
Tan, Stanley
Tasheva, Stefka
Thomas, Paul
Thompson, Jeremy
Thompson, Elise
Thomsen, Dana
Thomson, Rebecca
Thomson, Ella
Tonkin, Anne
Tran, Thach
Tuckerman, Jane
Van Dam, Jago
Van Eyk, Clare
Varcoe, Tamara
Vassilev, Ivan
Verburg, Petra
Viscione, Maria
Wahid, Hanan
Walker, Mary
Wan, Qianhui
Wang, Rui
Wang, Bing
Warin, Megan
Watson, Laura
Wheeler, Alexis
White, Melissa

Whitrow, Melissa
Whitty, Annie
Williams, Nicole
Willson, Kristyn
Wilson, Rebecca
Wong, Siew
Wooldridge, Amy
Wrin, Joe
Wu, Linda
Yanni, Marianne
Yap, Annabele
Yelland, Lisa
Zemtis, Jess
Zhang, Sasha
Zhang, Bihong
Zheng, Xixi
Zivkovic, Tanya
Zysk, Aneta

Clinical Partners

Anderson, Chad
Boros, Christina
Duggan, Paul
Froessler, Bernd
Grivell, Rosalie
Haslam, Ross
McPhee, Andrew
Pena, Alexia
Smith, Nicholas
Symonds, Ian
Teague, Warwick
Wilkinson, Chris

Core Facilities Leaders

Barry, Simon
Breen, Jimmy
Champion,
Stephanie
Gummow, Jason
Kennaway, David
Knight, Emma
Roberts, Claire
Russell, Darryl
Salkeld, Mark
Thomas, Paul
White, Melissa

Affiliate Members

Anson, Donald
Avery, Jodie
Barry, Michael
Buisman-Pijlman,
Femke
Clifton, Vicki
Gilchrist, Robert
Johnson, Neil
Makrides, Maria
McColl, Shaun
Moran, Lisa
Mottershead, David
Omari, Taher
Sales, Kurt
Tufanaru, Catalin
Whitehead, Clare
Wilkinson, Dominic
Xafis, Vicki
Zander-Fox, Deirdre
Zhou, Jo

Emeritus Faculty

Hopwood, John
MacLennan, Alastair
Matthews, Colin
Mulley, John
O'Loughlin, John
Payne, Dianna
Petrucco, Ossie
Robertson, Don
Robinson, Jeffrey
Seamark, Bob
Setchell, Brian
Sutherland, Grant

Professional Staff

Goddard, Marcus
Eley, Sarah
Hooper, Mairead
Trueman, Cathy
Xu, Khloe

Publications

1. Abheiden, C., Van Hoorn, M., Hague, W., Kostense, P., Van Pampus, M., & De Vries, J. (2016). Authors' reply re: Does low-molecular-weight heparin influence fetal growth or uterine and umbilical arterial Doppler in women with a history of early-onset uteroplacental insufficiency and an inheritable thrombophilia? Secondary randomised controlled trial results. *BJOG: An International Journal of Obstetrics and Gynaecology*, 123(5), 844-845.
2. Abheiden, C., Van Hoorn, M., Hague, W., Kostense, P., Van Pampus, M., & De Vries, J. (2016). Authors' reply re: Does low-molecular-weight heparin influence fetal growth or uterine and umbilical arterial Doppler in women with a history of early-onset uteroplacental insufficiency and an inheritable thrombophilia? Secondary randomised controlled trial results. *BJOG: An International Journal of Obstetrics and Gynaecology*, 123(5), 843.
3. Adams, D., Clark, R., Davies, M., & de Lacey, S. (2016). A meta-analysis of neonatal health outcomes from oocyte donation. *Journal of Developmental Origins of Health and Disease*, 7(3), 257-272.
4. Afawi, Z., Oliver, K., Kivity, S., Mazarib, A., Blatt, I., Neufeld, M., Helbig, K., Goldberg-Stern, H., Misk, A., Straussberg, R., Walid, S., Mahajnah, M., Lerman-Sagie, T., Ben-Zeev, B., Kahana, E., Masalha, R., Kramer, U., Ekstein, D., Shorer, Z., Wallace, R., Mangelsdorf, M., MacPherson, J., Carvill, G., Mefford, H., Jackson, G., Scheffer, I., Bahlo, M., Gecz, J., Heron, S., Corbett, M., Mulley, J., Dibbens, L., Koczyrn, A., & Berkovic, S. (2016). Multiplex families with epilepsy: success of clinical and molecular genetic characterization. *Neurology*, 86(8), 713-722.
5. Ahmed, R. J., Gafni, A., Hutton, E. K., Hu, Z. J., Pullenayegum, E., von Dadelszen, P., Rey, E., Ross, S., Asztalos, E., Murphy, K. E., Menzies, J., Sanchez, J. J., Ganzevoort, W., Helewa, M., Lee, S. K., Lee, T., Logan, A. G., Moutquin, J. M., Singer, J., Thornton, J. G., Welch, R., & Magee, L. A. (2016). The Cost Implications of Less Tight Versus Tight Control of Hypertension in Pregnancy (CHIPS Trial) Novelty and Significance. *Hypertension*, 68(4), 1049-1055.
6. Akison, L., Andraweera, P., Bertoldo, M., Brown, H., Cuffe, J., Fullston, T., Holland, O., & Schjenken, J. (2016). The current state of reproductive biology research in Australia and New Zealand: core themes from the Society for Reproductive Biology Annual Meeting, 2016. *Reproduction, Fertility and Development*.
7. Alvarenga, T., Copping, K., Han, X., Clayton, E., Meyer, R., Rodgers, R., McMillen, I., Perry, V., & Geesink, G. (2016). The influence of periconception and first trimester dietary restriction of protein in cattle on meat quality traits of entire male progeny. *Meat Science*, 121(C), 141-147.
8. Alvarez, G., Casiro, S., Gutnisky, C., Dalvit, G., Sutton-McDowall, M., Thompson, J., & Cetica, P. (2016). Implications of Glycolytic and Pentose Phosphate Pathways on the oxidative status and active mitochondria of the porcine oocyte during in vitro maturation. *Theriogenology*, 86(9), 2096-2106.
9. Amin, T., Coates, P., Barbara, J., Hakendorf, P., & Karim, N. (2016). Prevalence of Hypercalcaemia in a Renal Transplant Population: A Single Centre Study. *International Journal of Nephrology*, 2016, 7126290.
10. Anderson, J., Couper, J., Mpundu-Kaambwa, C., Giles, L., Gent, R., Coppin, B., & Peña, A. (2016). An extra 1,000 steps per day relates to improved cardiovascular health in children with type 1 diabetes. *Diabetes Care*, 39(8), e108-e109.
11. Andraweera, P., Bobek, G., Bowen, C., Burton, G., Correa Frigerio, P., Chaparro, A., Dickinson, H., Duncombe, G., Hyett, J., Illanes, S., Johnstone, E., Kumar, S., Morgan, T., Myers, J., Orefice, R., Roberts, C., Salafia, C., Thornburg, K., Whitehead, C., & Bainbridge, S. (2016). IFPA meeting 2015 workshop report II: mechanistic role of the placenta in fetal programming; biomarkers of placental function and complications of pregnancy. *Placenta*, 48, S7-S11.
12. Andraweera, P., Dekker, G., Jayasekara, R., Dissanayake, V., & Roberts, C. (2016). Polymorphisms in the inflammatory pathway genes and the risk of preeclampsia in Sinhalese women. *Journal of Maternal-Fetal & Neonatal Medicine*, 29(7), 1072-1076.
13. Andraweera, P., Dekker, G., Leemaqz, S., McCowan, L., & Roberts, C. (2016). The obesity associated FTO gene variant and the risk of adverse pregnancy outcomes: evidence from the SCOPE study. *Obesity*, 24(12), 2600-2607.
14. Ansari, S., Lassi, Z., Ali, S., Adil, S., & Shamsi, T. (2016). Hydroxyurea for β -thalassaemia major. *Cochrane Database of Systematic Reviews*, 2016(1).
15. Anuradha, S., Donovan, P. J., Webb, P. M., Brand, A. H., Goh, J., Friedlander, M., Oehler, M. K., Quinn, M., Steer, C., & Jordan, S. J. (2016). Variations in adjuvant chemotherapy and survival in women with epithelial ovarian cancer - a population-based study. *Acta Oncologica*, 55(2), 226-233.
16. Ataman, L., Rodrigues, J., Marinho, R., Caetano, J., Chehin, M., Alves da Motta, E., Serafini, P., Suzuki, N., Furui, T., Takae, S., Sugishita, Y., Morishige, K. I., Almeida-Santos, T., Melo, C., Buzaglio, K., Irwin, K., Wallace, W., Anderson, R., Mitchell, R., Telfer, E., Adiga, S., Anazodo, A., Stern, C., Sullivan, E., Jayasinghe, Y., Orme, L., Cohn, R., McLachlan, R., Deans, R., Agresta, F., Gerstl, B., Ledger, W., Robker, R., de Meneses E Silva, J., Silva, L., Lunardi, F., Lee, J., Suh, C., De Vos, M., Van Moer, E., Stoop, D., Vloeberghs, V., Smitz, J., Tournaye, H., Wildt, L., Winkler-Crepaz, K., Andersen, C., Smith, B., Smith, K., & Woodruff, T. (2016). Creating a Global Community of Practice for Oncofertility. *Journal of global oncology*, 2(2), 83-96.
17. Atashgaran, V., Wrin, J., Barry, S., Dasari, P., & Ingman, W. (2016). Dissecting the biology of menstrual cycle-associated breast cancer risk. *Frontiers in Oncology*, 6(DEC), 1-10.
18. Avery, J. C., & Stocks, N. (2016). Urinary incontinence, depression and psychological factors - A review of population studies. *European Medical Journal Urology*, 1(1), 58-67.
19. Baekelandt, J., De Mulder, P. A., Le Roy, I., Mathieu, C., Laenen, A., Enzlin, P., Weyers, S., Mol, B. W., & Bosteels, J. J. (2016). HALON-hysterectomy by transabdominal laparoscopy or natural orifice transluminal endoscopic surgery: a randomised controlled trial (study protocol). *BMJ Open*, 6(8), e011546.
20. Bain, E., Middleton, P., & Crowther, C. (2016). Progressing towards standard outcomes in gestational diabetes Cochrane reviews and randomised trials. *Australian and New Zealand Journal of Obstetrics and Gynaecology*, 56(1), 113-116.
21. Balen, A., Morley, L., Misso, M., Franks, S., Legro, R., Wijayarathne, C., Stener-Victorin, E., Fauser, B., Norman, R., & Teede, H. (2016). The management of anovulatory infertility in women with polycystic ovary syndrome: An analysis of the evidence to support the development of global WHO guidance. *Human Reproduction Update*, 22(6), 687-708.
22. Balestrini, S., Milh, M., Castiglioni, C., Lüthy, K., Finelli, M., Verstreken, P., Cardon, A., Stražišar, B., Holder, J., Lesca, G., Mancardi, M., Poulat, A., Repetto, G., Banka, S., Bilo, L., Birkeland, L., Bosch, F., Brockmann, K., Cross, J., Doummar, D., Félix, T., Giuliano, F., Hori, M., Hüning, I., Kayserili, H., Kini, U., Lees, M., Meenakshi, G., Mewasingh, L., Pagnamenta, A., Peluso, S., Mey, A., Rice, G., Rosenfeld, J., Taylor, J., Troester, M., Stanley, C., Ville, D., Walkiewicz, M., Falace, A., Fassio, A., Lemke, J., Biskup, S., Tardif, J., Ajeawung, N., Tolun, A., Corbett, M., Gecz, J., Afawi, Z., Howell, K., Oliver, K., Berkovic, S., Scheffer, I., De Falco, F., Oliver, P., Striano, P., Zara, F., Campeau, P., & Sisodiya, S. (2016). TBC1D24 genotype-phenotype correlation. *Neurology*, 87(1), 77-85.
23. Balogun, O., da Silva Lopes, K., Ota, E., Takemoto, Y., Rumbold, A., Takegata, M., & Mori, R. (2016). Vitamin supplementation for preventing miscarriage. *Cochrane Database of Systematic Reviews*, 2016(5).
24. Bastian, N., Bayne, R., Hummitzsch, K., Hatzirodos, N., Bonner, W., Hartanti, M., Irving-Rodgers, H., Anderson, R., & Rodgers, R. (2016). Regulation of fibrillins and modulators of TGF β in fetal bovine and human ovaries. *Reproduction*, 152(2), 127-137.
25. Baumert, M., Pamula, Y., Martin, J., Kennedy, D., Ganesan, A., Kabir, M., Kohler, M., & Immanuel, S. (2016). The effect of adenotonsillectomy for childhood sleep apnoea on cardiorespiratory control. *ERJ Open Research*, 2(2).
26. Bendsdorp, A., Hukkelhoven, C., van der Veen, F., Mol, B., Lambalk, C., & van Wely,

- M. (2016). Dizygotic twin pregnancies after medically assisted reproduction and after natural conception: Maternal and perinatal outcomes. *Fertility and Sterility*, 106(2), 371-377.e372.
- 27.** Bendsdorp, A., Tjon-Kon-Fat, R., Verhoeve, H., Koks, C., Hompes, P., Hoek, A., de Bruin, J., Cohlen, B., Hoozemans, D., Broekmans, F., van Bomme, P., Smeenk, J., Mol, B., van der Veen, F., & van Wely, M. (2016). Dropout rates in couples undergoing in vitro fertilization and intrauterine insemination. *European Journal of Obstetrics Gynecology and Reproductive Biology*, 205(C), 66-71.
- 28.** Bergenhenegouwen, L., Ensing, S., Ravelli, A., Schaaf, J., Kok, M., & Mol, B. (2016). Subsequent pregnancy outcome after preterm breech delivery, a population based cohort study. *Journal of Maternal-Fetal and Neonatal Medicine*, 29(15), 2539-2543.
- 29.** Bernardes, T., Broekhuijsen, K., Koopmans, C., Boers, K., van Wyk, L., Tajik, P., van Pampus, M., Scherjon, S., Mol, B., Franssen, M., van den Berg, P., & Groen, H. (2016). Caesarean section rates and adverse neonatal outcomes after induction of labour versus expectant management in women with an unripe cervix: a secondary analysis of the HYPITAT and DIGITAT trials. *BJOG: An International Journal of Obstetrics and Gynaecology*, 123(9), 1501-1508.
- 30.** Bernardes, T. P., Broekhuijsen, K., Koopmans, C. M., Boers, K. E., Van Wyk, L., Tajik, P., Van Pampus, M. G., Scherjon, S. A., Mol, B. W., Franssen, M. T., Van Den Berg, P. P., & Groen, H. (2016). Caesarean section rates and adverse neonatal outcomes after induction of labour versus expectant management in women with an unripe cervix: a secondary analysis of the HYPITAT and DIGITAT trials. *Obstetrical and Gynecological Survey*, 71(12), 691-692.
- 31.** Bernhardt, S., Dasari, P., Walsh, D., Townsend, A., Price, T., & Ingman, W. (2016). Hormonal modulation of breast cancer gene expression: Implications for intrinsic subtyping in premenopausal women. *Frontiers in Oncology*, 6(NOV), 1-16.
- 32.** Best, K., Gold, M., Kennedy, D., Martin, J., & Makrides, M. (2016). Omega-3 long-chain PUFA intake during pregnancy and allergic disease outcomes in the offspring: a systematic review and meta-analysis of observational studies and randomized controlled trials. *American Journal of Clinical Nutrition*, 103(1), 128-143.
- 33.** Best, K., Sullivan, T., Palmer, D., Gold, M., Kennedy, D., Martin, J., & Makrides, M. (2016). Prenatal fish oil supplementation and allergy: 6-year follow-up of a randomized controlled trial. *Pediatrics*, 137(6), 1-9.
- 34.** Bhatt, M., Khatri, Y., Rodgers, R., & Martin, L. (2016). Role of cytochrome b5 in the modulation of the enzymatic activities of cytochrome P450 17 α -hydroxylase/17,20-lyase (P450 17A1). *Journal of Steroid Biochemistry and Molecular Biology*, Online, 1-17.
- 35.** Bianco-Miotto, T., Blundell, C., Buckberry, S., Chamley, L., Chong, S., Cottrell, E., Dawson, P., Hanna, C., Holland, O., Lewis, R., Moritz, K., Myatt, L., Perkins, A., Powell, T., Saffery, R., Sferruzzi-Perri, A., Sibley, C., Simmons, D., & O'Tierney-Ginn, P. (2016). IFPA meeting 2015 workshop report I: placental mitochondrial function, transport systems and epigenetics. *Placenta*, 48, S3-S6.
- 36.** Bianco-Miotto, T., Mayne, B., Buckberry, S., Breen, J., Rodriguez Lopez, C., & Roberts, C. (2016). Recent progress towards understanding the role of DNA methylation in human placental development. *Reproduction*, 152(1), 23-30.
- 37.** Blakely, T., Lynch, J., & Bentley, R. (2016). Commentary: DAGs and the restricted potential outcomes approach are tools, not theories of causation. *International Journal of Epidemiology*, 45(6), 1835-1837.
- 38.** Boie, S., Velu, A., Glavind, J., Mol, B., Uldbjerg, N., de Graaf, I., Bor, P., & Bakker, J. (2016). Discontinuation of intravenous oxytocin in the active phase of induced labour. *Cochrane Database of Systematic Reviews*, 2016(7).
- 39.** Bokslag, A., van Weissenbruch, M., Mol, B., & de Groot, C. (2016). Preeclampsia; short and long-term consequences for mother and neonate. *Early Human Development*, 102(C), 47-50.
- 40.** Boscato, N., Schuch, H., Grasel, C., & Goettems, M. (2016). Differences of oral health conditions between adults and older adults: a census in a Southern Brazilian city. *Geriatrics and Gerontology International*, 16(9), 1014-1020.
- 41.** Boyle, J., Hollands, G., Beck, S., Hampel, G., Wapau, H., Arnot, M., Browne, L., Teede, H., & Moran, L. (2016). Process evaluation of a pilot evidence-based Polycystic Ovary Syndrome clinic in the Torres Strait. *Australian Journal of Rural Health*.
- 42.** Boyle, S., Ingman, W., Poltavets, V., Faulkner, J., Whitfield, R., McColl, S., & Kochetkova, M. (2016). The chemokine receptor CCR7 promotes mammary tumorigenesis through amplification of stem-like cells. *Oncogene*, 35(1), 105-115.
- 43.** Bradnam, L., McDonnell, M., & Ridding, M. (2016). Cerebellar intermittent theta-burst stimulation and motor control training in individuals with cervical dystonia. *Brain Sciences*, 6(4), 56-56.
- 44.** Braunack-Mayer, A. J., & Street, J. M. (2016). Approaches to Academic Integrity in Medical and Health Research. In T. Bretag (Ed.), *Handbook of Academic Integrity* (Vol. 1, pp. 749-761). Singapore: Springer.
- 45.** Breen, J., Mur, L. A., Sivakumaran, A., Akinyemi, A., Wilkinson, M., & Rodriguez Lopez, C. M. (2016). Botrytis cinerea loss and restoration of virulence during in vitro culture follows flux in global DNA methylation. *BioRxiv, OnlinePubl*, 1-49.
- 46.** Breijer, M., & Mol, B. (2016). Transvaginal ultrasound measurement of the endometrium remains the first line test for investigating postmenopausal bleeding but integration of patient characteristics into testing may further improve diagnostic algorithms. *BJOG: An International Journal of Obstetrics and Gynaecology*, 123(3), 447.
- 47.** Breijer, M., Visser, N., Van Hanegem, N., Van Der Wurff, A., Opmeer, B., Van Doorn, H., Mol, B., Pijnenborg, J., & Timmermans, A. (2016). A Structured Assessment to Decrease the Amount of Inconclusive Endometrial Biopsies in Women with Postmenopausal Bleeding. *International Journal of Surgical Oncology*, 2016.
- 48.** Brinkman, S., Johnson, S., Codde, J., Hart, M., Straton, J., Mittinty, M., & Silburn, S. (2016). Efficacy of infant simulator programmes to prevent teenage pregnancy: a school-based cluster randomised controlled trial in Western Australia. *The Lancet*, 388(10057), 2264-2271.
- 49.** Brodaty, H., Connors, M., Loy, C., Teixeira-Pinto, A., Stocks, N., Gunn, J., Mate, K., & Pond, C. (2016). Screening for dementia in primary care: a comparison of the GPCOG and the MMSE. *Dementia and Geriatric Cognitive Disorders*, 42(5-6), 323-330.
- 50.** Brown, A., Fereday, J., Middleton, P., & Pincombe, J. (2016). Aboriginal and Torres Strait Islander women's experiences accessing standard hospital care for birth in South Australia - A phenomenological study. *Women and Birth*, Online(4), 1-9.
- 51.** Brown, A., Middleton, P., Fereday, J., & Pincombe, J. (2016). Cultural safety and midwifery care for Aboriginal women - A phenomenological study. *Women and Birth*, 29(2), 196-202.
- 52.** Brown, J., Crawford, T. J., Alsweller, J., & Crowther, C. A. (2016). Dietary supplementation with myo-inositol in women during pregnancy for treating gestational diabetes. *Cochrane Database of Systematic Reviews*, 2016(9).
- 53.** Brown, J., Grzeskowiak, L., Williamson, K., Downie, M., & Crowther, C. (2016). Insulin for the treatment of women with gestational diabetes. *Cochrane Database of Systematic Reviews*, 2016(1).
- 54.** Bruijn, M., Kamphuis, E., Hoesli, I., de Tejada, B., Loccufier, A., Kühnert, M., Helmer, H., Franz, M., Porath, M., Oudijk, M., Jacquemyn, Y., Schulzke, S., Vetter, G., Hoste, G., Vis, J., Kok, M., Mol, B., & van Baaren, G. (2016). The predictive value of quantitative fibronectin testing in combination with cervical length measurement in symptomatic women. *American Journal of Obstetrics and Gynecology*, 215(6).
- 55.** Bruijn, M., Vis, J., Wilms, F., Oudijk, M., Kwee, A., Porath, M., Oei, G., Scheepers, H., Spaanderman, M., Bloemenkamp, K., Haak, M., Bolte, A., Vandenbussche, F., Woiski, M., Bax, C., Cornette, J., Duvekot, J., Nij Bijvanck, B., van Eyck, J., Franssen, M., Sollie, K., van der Post, J., Bossuyt, P., Opmeer, B., Kok, M., Mol, B., & van Baaren, G. (2016). Quantitative fetal fibronectin testing in combination with cervical length measurement in the prediction of spontaneous preterm delivery in symptomatic women. *BJOG: An International Journal of Obstetrics and Gynaecology*, 123(12), 1965-1971.
- 56.** Bruijn, M., Vis, J., Wilms, F., Oudijk, M., Kwee, A., Porath, M., Oei, G., Scheepers, H., Spaanderman, M., Bloemenkamp, K., Haak, M., Bolte, A., Vandenbussche, F., Woiski, M., Bax, C., Cornette, J., Duvekot, J., Nij Bijvanck, B., van Eyck, J., Franssen, M., Sollie, K., van der Post, J., Bossuyt, P., Opmeer, B., Kok, M., Mol, B., & van Baaren, G. (2016). Comparison of the Actim Partus test and the fetal fibronectin test in the prediction of spontaneous preterm birth in symptomatic women undergoing

- cervical length measurement. *European Journal of Obstetrics Gynecology and Reproductive Biology*, 206(C), 220-224.
- 57.** Burgess, T., Braunack-Mayer, A., Toohar, R., Collins, J., O'Keefe, M., Skinner, R., Watson, M., Ashmeade, H., Provee, C., & Marshall, H. (2016). Optimizing intersectoral collaboration between health and education: the Health Bridges study. *Journal of Public Health*, 38(4), e430-e437.
- 58.** Byrne, R., & Mol, B. (2016). Are we stopping preterm birth trials too early? *American Journal of Obstetrics and Gynecology*, 214(1), 134-135.
- 59.** Callaghan, M., McAuliffe, P., Rodgers, R., Hernandez-Medrano, J., & Perry, V. (2016). Subacute ruminal acidosis reduces sperm quality in beef bulls. *Journal of Animal Science*, 94(8), 3215-3228.
- 60.** Camfferman, D., Short, M., Kennedy, J., Gold, M., Kohler, M., & Lushington, K. (2016). Thermoregulation, scratch, itch and sleep deficits in children with eczema. *Sleep Medicine*, 25(C), 145-150.
- 61.** Campbell, K., Hesketh, K., McNaughton, S., Ball, K., McCallum, Z., Lynch, J., & Crawford, D. (2016). The extended Infant Feeding, Activity and Nutrition Trial (InFANT Extend) Program: A cluster-randomized controlled trial of an early intervention to prevent childhood obesity Energy balance-related behaviors. *BMC Public Health*, 16(1).
- 62.** Carrington, M., Jennings, G., Harris, M., Nelson, M., Schlaich, M., Stocks, N., Burrell, L., Amerena, J., de Looze, F., Swemmer, C., Kurstjens, N., & Stewart, S. (2016). Impact of nurse-mediated management on achieving blood pressure goal levels in primary care: insights from the Valsartan Intensified Primary care Reduction of Blood Pressure Study. *European Journal of Cardiovascular Nursing*, 15(6), 409-416.
- 63.** Carroll, R., Riceman, M., Hope, C., Zeng, A., Deayton, S., Bennett, G., & Coates, P. (2016). Angiotensin II type-1 receptor antibody (AT1Rab) associated humoral rejection and the effect of peri operative plasma exchange and candesartan. *Human Immunology*, 77(12), 1154-1158.
- 64.** Carter, D., Sendziuk, P., Elliott, J., & Braunack-Mayer, A. (2016). Why is pain still under-treated in the emergency department? Two new hypotheses. *Bioethics*, 30(3), 195-202.
- 65.** Cecatti, J., Souza, R., Sulek, K., Costa, M., Kenny, L., McCowan, L., Pacagnella, R., Villas-Boas, S., Mayrink, J., Passini, R., Franchini, K., Baker, P., Parpinelli, M., Calderon, I., Cassettari, B., Vettorazzi, J., Pfischer, L., Filho, E., Leite, D., Feitosa, F., Costa e Silva, C., Poston, L., Myers, J., Simpson, N., Walker, J., Dekker, G., & Roberts, C. (2016). Use of metabolomics for the identification and validation of clinical biomarkers for preterm birth: Preterm SAMBA. *BMC Pregnancy and Childbirth*, 16(1).
- 66.** Ceko, M., O'Leary, S., Harris, H., Hummitzsch, K., & Rodgers, R. (2016). Trace elements in ovaries: measurement and physiology. *Biology of Reproduction*, 94(4), 86-81-86-14.
- 67.** Chen, J., Wang, R., Zhang, B., Lin, X., Wei, J., Jia, Y., Yin, Y., Ye, S., Zhu, T., Chen, G., Yuan, Y., Lu, W., & Li, K. (2016). Safety of ovarian preservation in women with stage I and II cervical adenocarcinoma: a retrospective study and meta-analysis. *American Journal of Obstetrics And Gynecology*, 215(4), 460.e461-460.e413.
- 68.** Chen, M., Liu, B., Thompson, C., Wittert, G., & Heilbronn, L. (2016). Acute overfeeding does not alter liver or adipose tissue-derived cytokines in healthy humans. *Annals of Nutrition and Metabolism*, 69(3-4), 165-170.
- 69.** Chen, M., Liu, B., Wilkinson, D., Hutchison, A., Thompson, C., Wittert, G., & Heilbronn, L. (2016). Selenoprotein P is elevated in individuals with obesity, but is not independently associated with insulin resistance. *Obesity Research and Clinical Practice*, 11(2), 227-232.
- 70.** Cheong-See, F., Allotey, J., Marlin, N., Mol, B., Schuit, E., ter Riet, G., Riley, R., Moons, K., Khan, K., & Thangaratinam, S. (2016). Prediction models in obstetrics: understanding the treatment paradox and potential solutions to the threat it poses. *BJOG: An International Journal of Obstetrics and Gynaecology*, 123(7), 1060-1064.
- 71.** Cheong-See, F., Schuit, E., Arroyo-Manzano, D., Khalil, A., Barrett, J., Joseph, K., Asztalos, E., Hack, K., Lewi, L., Lim, A., Liem, S., Norman, J., Morrison, J., Combs, C., Garite, T., Maurel, K., Serra, V., Perales, A., Rode, L., Worda, K., Nassar, A., Aboulghar, M., Rouse, D., Thom, E., Breathnach, F., Nakayama, S., Maria Russo, F., Robinson, J., Dodd, J., Newman, R., Bhattacharya, S., Tang, S., Mol, B., Zamora, J., Thilaganathan, B., & Thangaratinam, S. (2016). Prospective risk of stillbirth and neonatal complications in twin pregnancies: Systematic review and meta-analysis. *BMJ (Online)*, 354, 1-9.
- 72.** Chin, P., Dorian, C., Hutchinson, M., Olson, D., Rice, K., Moldenhauer, L., & Robertson, S. (2016). Novel Toll-like receptor-4 antagonist (+)-naloxone protects mice from inflammation-induced preterm birth. *Scientific Reports*, 6.
- 73.** Chittleborough, C., Searle, A., Smithers, L., Brinkman, S., & Lynch, J. (2016). How well can poor child development be predicted from early life characteristics?: A whole-of-population data linkage study. *Early Childhood Research Quarterly*, 35(C), 19-30.
- 74.** Chong, S., Chittleborough, C., Gregory, T., Mittinty, M., Lynch, J., & Smithers, L. (2016). Parenting practices at 24 to 47 Months and IQ at age 8: effect-measure modification by infant temperament. *PLOS ONE*, 11(3).
- 75.** Christo, S., Bachhuka, A., Diener, K., Mierczynska, A., Hayball, J., & Vasilev, K. (2016). The role of surface nanotopography and chemistry on primary neutrophil and macrophage cellular responses. *Advanced Healthcare Materials*, 5(8), 956-965.
- 76.** Christo, S., Bachhuka, A., Diener, K., Vasilev, K., & Hayball, J. (2016). The contribution of inflammasome components on macrophage response to surface nanotopography and chemistry. *Scientific Reports*, 6.
- 77.** Christo, S., Diener, K., Manavis, J., Grimbaldston, M., Bachhuka, A., Vasilev, K., & Hayball, J. (2016). Inflammasome components ASC and AIM2 modulate the acute phase of biomaterial implant-induced foreign body responses. *Scientific Reports*, 6.
- 78.** Cissen, M., Van Wely, M., Scholten, I., Mansell, S., De Bruin, J., Mol, B., Braat, D., Repping, S., & Hamer, G. (2016). Measuring sperm DNA fragmentation and clinical outcomes of medically assisted reproduction: A systematic review and meta analysis. *PLOS ONE*, 11(11).
- 574.** Clapin, H., Phelan, H., Bruns Jr, L., Sinnott, R., Colman, P., Craig, M., Jones, T., & Australasian Diabetes Data Network (ADDN) Study Group. (2016). *Australasian Diabetes Data Network: Building a Collaborative Resource*. Journal of diabetes science and technology, 10(5), 1015-1026.
- 79.** Clarke, M., McIntyre, P., Blyth, C., Wood, N., Octavia, S., Sintchenko, V., Giles, L., Quinn, H., Hill, V., Hanly, G., Lan, R., & Marshall, H. (2016). The relationship between Bordetella pertussis genotype and clinical severity in Australian children with pertussis. *Journal of Infection*, 72(2), 171-178.
- 80.** Clifton, V., Moss, T., Wooldridge, A., Gatford, K., Liravi, B., Kim, D., Muhlhausler, B., Morrison, J., Davies, A., De Matteo, R., Wallace, M., & Bischof, R. (2016). Development of an experimental model of maternal allergic asthma during pregnancy. *Journal of Physiology*, 594(5), 1311-1325.
- 81.** Coenders-Tros, R., Van Kessel, M., Vernooij, M., Oosterhuis, G., Kuchenbecker, W., Mol, B., & Koks, C. (2016). Performance of outpatient transvaginal hydrolaparoscopy. *Human Reproduction*, 31(10), 2285-2291.
- 82.** Coleman, M., Jessup, C., Bridge, J., Overgaard, N., Penko, D., Walters, S., Borg, D., Galea, R., Forbes, J., Thomas, R., Coates, P., Grey, S., Wells, J., & Steptoe, R. (2016). Antigen-encoding bone marrow terminates islet-directed memory CD8⁺ T-cell responses to alleviate islet transplant rejection. *Diabetes*, 65(5), 1328-1340.
- 83.** Collins, C., Gibson, R., Makrides, M., McPhee, A., Sullivan, T., Davis, P., Thio, M., Simmer, K., Rajadurai, V., Ryan, P., Morris, S., Stark, M., Travadi, J., Wright, I., Tan, K., Holberton, J., Opie, G., Callander, I., Stack, J., Shein, D., Bellhouse, S., Bolisetty, S., Lui, K., Liley, H., Berry, M., Harris, D., Chua, M., & Agarwal, P. (2016). The N3RO trial: a randomised controlled trial of docosahexaenoic acid to reduce bronchopulmonary dysplasia in preterm infants < 29 weeks' gestation. *BMC Pediatrics*, 16(1), 72-79.
- 84.** Collins, C., Gibson, R., McPhee, A., Sullivan, T., & Makrides, M. (2016). THE N3RO TRIAL: A Randomised Controlled Trial Of Docosahexaenoic Acid For The Reduction Of Bronchopulmonary Dysplasia In Preterm Infants < 29 Weeks' Gestation. *European Journal Of Pediatrics*, 175(11).
- 85.** Collins, C., Gillis, J., McPhee, A., Sukanuma, H., & Makrides, M. (2016). Avoidance of bottles during the establishment of breast feeds in preterm infants. *Cochrane Database of Systematic Reviews*, 2016(9).
- 86.** Combs, C., Schuit, E., Caritis, S., Lim, A., Garite, T., Maurel, K., Rouse, D., Thom, E., Tita, A., & Mol, B. (2016). 17-Hydroxyprogesterone

- caproate in triplet pregnancy: an individual patient data meta-analysis. *BJOG: An International Journal of Obstetrics and Gynaecology*, 123(5), 682-690.
- 87.** Conde, M., Chisini, L., Sarkis-Onofre, R., Schuch, H., Nör, J., & Demarco, F. (2016). A scoping review of root canal revascularization: Relevant aspects for clinical success and tissue formation. *International Endodontic Journal*, Online, 1-15.
- 88.** Condo, D., Huyhn, D., Anderson, A., Skeaff, S., Ryan, P., Makrides, M., Mühlhäusler, B., & Zhou, S. (2016). Iodine status of pregnant women in South Australia after mandatory iodine fortification of bread and the recommendation for iodine supplementation. *Maternal and Child Nutrition*.
- 89.** Coomarasamy, A., Williams, H., Truchanowicz, E., Seed, P., Small, R., Quenby, S., Gupta, P., Dawood, F., Koot, Y., Atik, R., Bloemenkamp, K., Brady, R., Briley, A., Cavallaro, R., Cheong, Y., Chu, J., Eapen, A., Essex, H., Ewies, A., Hoek, A., Kaaijk, E., Koks, C., Li, T., Maclean, M., Mol, B., Moore, J., Parrott, S., Ross, J., Sharpe, L., Stewart, J., Trépel, D., Vaithilingam, N., Farquharson, R., Kilby, M., Khalaf, Y., Goddijn, M., Regan, L., & Rai, R. (2016). PROMISE: First-trimester progesterone therapy in women with a history of unexplained recurrent miscarriages – A randomised, double-blind, placebo-controlled, international multicentre trial and economic evaluation. *Health Technology Assessment*, 20(41), 7-91.
- 90.** Cooper, S., Davies, C., McBride, K., Blades, J., Stoney, T., Marshall, H., & Skinner, S. (2016). Development of a human papillomavirus vaccination intervention for Australian adolescents. *Health Education Journal*, 75(5), 610-620.
- 91.** Corbett, M., Bellows, S., Li, M., Carroll, R., Micalef, S., Carvill, G., Myers, C., Howell, K., Maljevic, S., Lerche, H., Gazina, E., Mefford, H., Bahlo, M., Berkovic, S., Petrou, S., Scheffer, I., & Gecez, J. (2016). Dominant KCNA2 mutation causes episodic ataxia and pharmacoresponsive epilepsy. *Neurology*, 87(19), 1975-1984.
- 572.** Corbett, M., Hunter, M. & Géczy, J. (2016). *Börjeson-Forssman-Lehmann syndrome and PHF6*. Epstein's Inborn Errors of Development: the molecular basis of clinical disorders of morphogenesis (IED), Oxford University Press, New York. 3rd edition, p.935-941.
- 92.** Crawford, N., Hodgson, K., Gold, M., BATTERY, J., & Wood, N. (2016). Adverse events following HPV immunization in Australia: Establishment of a clinical network. *Human Vaccines and Immunotherapeutics*, 12(10), 2662-2665.
- 93.** Crawford, T., Crowther, C., Alsweiler, J., & Brown, J. (2016). Dietary supplementation with myo-inositol in women during pregnancy for treating gestational diabetes. *Cochrane Database Of Systematic Reviews*, 2016(2).
- 94.** Crowley, A., Grivell, R., & Dodd, J. (2016). Sealing procedures for preterm prelabour rupture of membranes. *Cochrane Database Of Systematic Reviews*, 2016(7).
- 95.** Crowther, C., Anderson, P., McKinlay, C., Harding, J., Ashwood, P., Haslam, R., Robinson, J., & Doyle, L. (2016). Mid-childhood outcomes of repeat antenatal corticosteroids: a randomized controlled trial. *Pediatrics*, 138(4).
- 96.** Crowther, C., & Harding, J. (2016). Antenatal glucocorticoids for late preterm birth? *New England Journal of Medicine*, 374(14), 1376-1377.
- 97.** Cullinley, K., Parry, G., Brown, J., & Crowther, C. (2016). Regimens of fetal surveillance of suspected large-for-gestational-age fetuses for improving health outcomes. *Cochrane Database Of Systematic Reviews*, 2016(4).
- 98.** Czechowski, P., Clarke, L. J., Breen, J., Cooper, A., & Stevens, M. I. (2016). Antarctic eukaryotic soil diversity of the Prince Charles Mountains revealed by high-throughput sequencing. *Soil Biology and Biochemistry*, 95(C), 112-121.
- 99.** Da Silva, F., Gonik, B., McMillan, M., Keech, C., Dellicour, S., Bhange, S., Tila, M., Harper, D., Woods, C., Kawai, A., Kochhar, S., & Munoz, F. (2016). Stillbirth: Case definition and guidelines for data collection, analysis, and presentation of maternal immunization safety data. *Vaccine*, 34(49), 6057-6068.
- 100.** Dalilottojari, A., Delalat, B., Harding, F. J., Cockshell, M. P., Bonder, C. S., & Voelcker, N. H. (2016). Porous Silicon-Based Cell Microarrays: Optimizing Human Endothelial Cell-Material Surface Interactions and Bioactive Release. *Biomacromolecules*, 17(11), 3724-3731.
- 101.** Das, J., & Salam, R. (2016). Improving Access and Reducing Childhood Deaths due to Pneumonia. *Indian Pediatrics*, 53(6), 477-478.
- 102.** Das, J., Salam, R., Arshad, A., Finkelstein, Y., & Bhutta, Z. (2016). Interventions for Adolescent Substance Abuse: An Overview of Systematic Reviews. *Journal of Adolescent Health*, 59(2), S61-S75.
- 103.** Das, J., Salam, R., Arshad, A., Lassi, Z., & Bhutta, Z. (2016). Systematic Review and Meta-Analysis of Interventions to Improve Access and Coverage of Adolescent Immunizations. *Journal of Adolescent Health*, 59(2), S40-S48.
- 104.** Das, J., Salam, R., Lassi, Z., Khan, M., Mahmood, W., Patel, V., & Bhutta, Z. (2016). Interventions for Adolescent Mental Health: An Overview of Systematic Reviews. *Journal of Adolescent Health*, 59(2), S49-S60.
- 105.** Dave, A., Martin, S., Kumar, R., Craig, J., Burdon, K., & Sharma, S. (2016). EPHA2 mutations contribute to congenital cataract through diverse mechanisms. *Molecular Vision*, 22, 18-30.
- 106.** Davies, M., Rumbold, A., Marino, J., Willson, K., Giles, L., Whitrow, M., Scheil, W., Moran, L., Thompson, J., Lane, M., & Moore, V. (2016). Maternal factors and the risk of birth defects after IVF and ICSI: A whole of population cohort study. *BJOG: An International Journal of Obstetrics and Gynaecology*.
- 107.** Davies, M., Rumbold, A., Whitrow, M., Willson, K., Scheil, W., Mol, B., & Moore, V. (2016). Spontaneous loss of a co-twin and the risk of birth defects after assisted conception. *Journal of Developmental Origins of Health and Disease*, 7(6), 678-684.
- 108.** De Hundt, M., Vlemmix, F., Bais, J., De Groot, C., Mol, B., & Kok, M. (2016). Risk factors for cesarean section and instrumental vaginal delivery after successful external cephalic version. *Journal of Maternal-Fetal and Neonatal Medicine*, 29(12), 2005-2007.
- 109.** De Sousa, S., & Norman, R. (2016). Metabolic syndrome, diet and exercise. *Best Practice and Research: Clinical Obstetrics and Gynaecology*, 37, 140-151.
- 110.** De Vos, M., Smits, J., Thompson, J., & Gilchrist, R. (2016). The definition of IVM is clear - Variations need defining. *Human Reproduction*, 31(11), 2411-2415.
- 111.** Delalat, B., Rojas-Canales, D., Rasi Ghaemi, S., Waibel, M., Harding, F., Penko, D., Drogemuller, C., Loudovaris, T., Coates, P., & Voelcker, N. (2016). A combinatorial protein microarray for probing materials interaction with pancreatic islet cell populations. *Microarrays*, 5(3), 21-21.
- 112.** Delforce, S., Wang, Y., Van-Aalst, M., Corbisier De Meaultsart, C., Morris, B., Broughton-Pipkin, F., Roberts, C., Lumbers, E., & Pringle, K. (2016). Effect of oxygen on the expression of renin-angiotensin system components in a human trophoblast cell line. *Placenta*, 37(C), 1-6.
- 113.** Denham, R., McGee, T., Eriksson, L., McGrath, J., Norman, R., Sawyer, M., & Scott, J. (2016). Frequent peer problems in Australian children and adolescents. *Journal of Aggression, Conflict and Peace Research*, 8(3), 162-173.
- 114.** DeNichilo, M., Shoubridge, A., Panagopoulos, V., Liapis, V., Zysk, A., Zinonos, I., Hay, S., Atkins, G., Findlay, D., & Evdokiou, A. (2016). Peroxidase enzymes regulate collagen biosynthesis and matrix mineralization by cultured human osteoblasts. *Calcified Tissue International*, 98(3), 294-305.
- 115.** Depmann, M., Broer, S., Van Der Schouw, Y., Tehrani, F., Eijkemans, M., Mol, B., & Broekmans, F. (2016). Can we predict age at natural menopause using ovarian reserve tests or mother's age at menopause? A systematic literature review. *Menopause*, 23(2), 224-232.
- 116.** Depmann, M., van Disseldorp, J., Broer, S., Eijkemans, M., Laven, J., Visser, J., de Rijke, Y., Mol, B., & Broekmans, F. (2016). Fluctuations in anti-Müllerian hormone levels throughout the menstrual cycle parallel fluctuations in the antral follicle count: a cohort study. *Acta Obstetrica et Gynecologica Scandinavica*, 95(7), 820-828.
- 117.** Derrick-Roberts, A., Panir, K., Pyragius, C., Zarrinkalam, K., Atkins, G., & Byers, S. (2016). Reversal of established bone pathology in MPS VII mice following lentiviral-mediated gene therapy. *Molecular Genetics and Metabolism*, 119(3), 249-257.
- 118.** DeSilva, M., Munoz, F., McMillan, M., Kawai, A., Marshall, H., Macartney, K., Joshi, J., Onoko, M., Rose, A., Dolk, H., Trotta, F., Spiegel, H., Tomczyk, S., Shrestha, A., Kochhar, S., & Kharbanda, E. (2016). Congenital anomalies: Case definition and guidelines for data collection, analysis, and presentation of immunization safety data. *Vaccine*, 34(49), 6015-6026.
- 119.** Dickinson, H., Davies-Tuck, M., Ellery, S., Grieger, J., Wallace, E., Snow, R., Walker,

- D., & Clifton, V. (2016). Maternal creatine in pregnancy: a retrospective cohort study. *BJOG: An International Journal of Obstetrics and Gynaecology*, 123(11), 1830-1838.
- 120.** Dickinson, H., Moss, T., Gatford, K., Moritz, K., Akison, L., Fullston, T., Hryciw, D., Maloney, C., Morris, M., Wooldridge, A., Schjenken, J., Robertson, S., Waddell, B., Mark, P., Wyrwoll, C., Ellery, S., Thornburg, K., Muhlhauser, B., & Morrison, J. (2016). A review of fundamental principles for animal models of DOHaD research: an Australian perspective. *Journal of Developmental Origins of Health and Disease*, 7(5), 449-472.
- 121.** Diener, K., Robertson, S., Hayball, J., & Lousberg, E. (2016). Multi-parameter flow cytometric analysis of uterine immune cell fluctuations over the murine estrous cycle. *Journal of Reproductive Immunology*, 113(C), 61-67.
- 122.** Dimasi, D., Pitson, S., & Bonder, C. (2016). Examining the role of sphingosine kinase-2 in the regulation of endothelial cell barrier integrity. *Microcirculation*, 23(3), 248-265.
- 123.** Do Nguyen, H. T., Wong, G., Chapman, J. R., McDonald, S. P., Coates, P. T., Watson, N., Russ, G. R., D'Orsogna, L., & Lim, W. H. (2016). The Association Between Broad Antigen HLA Mismatches, Eplet HLA Mismatches and Acute Rejection After Kidney Transplantation. *Transplantation direct*, 2(12).
- 124.** Dodd, J., Deussen, A., Mohamad, I., Rifas-Shiman, S., Yelland, L., Louise, J., McPhee, A., Grivell, R., Owens, J., Gillman, M., & Robinson, J. (2016). The effect of antenatal lifestyle advice for women who are overweight or obese on secondary measures of neonatal body composition: The LIMIT randomised trial. *BJOG: An International Journal of Obstetrics and Gynaecology*, 123(2), 244-253.
- 125.** Dodd, J., Grivell, R., Deussen, A., Dekker, G., Louise, J., & Hague, W. (2016). Metformin and dietary advice to improve insulin sensitivity and promote gestational restriction of weight among pregnant women who are overweight or obese: The GRoW randomised trial. *BMC Pregnancy and Childbirth*, 16(1), 351-359.
- 126.** Dodd, J., Grivell, R., O'Brien, C., Dowswell, T., & Deussen, A. (2016). Prenatal administration of progestogens for preventing preterm birth in women with a multiple pregnancy. *Cochrane Database Of Systematic Reviews*, 2016(1).
- 127.** Dodd, J., Newman, A., Moran, L., Deussen, A., Grivell, R., Yelland, L., Crowther, C., McPhee, A., Wittert, G., Owens, J., Turnbull, D., & Robinson, J. (2016). The effect of antenatal dietary and lifestyle advice for women who are overweight or obese on emotional well-being: the LIMIT randomized trial. *Acta Obstetrica et Gynecologica Scandinavica*, 95(3), 309-318.
- 128.** Dodd, J., & Thangaratnam, S. (2016). Researchers' position statement on tackling obesity in pregnancy: The International Weight Management in Pregnancy (i-WIP) collaboration pleads for public health intervention. *BJOG: An International Journal of Obstetrics and Gynaecology*, 123(2), 163-164.
- 129.** Donnelley, M., Awadalla, M., Morgan, K., Farrow, N., Hall, C., Acres, R., & Parsons, D. (2016). Assessing Particle Mucociliary Transit In Excised Sheep Trachea Using The Australian Synchrotron Imaging And Medical Beamline. *Respirology*, 21, 167-167.
- 130.** Dorward, H., Du, A., Bruhn, M., Wrin, J., Pei, J., Evdokiou, A., Price, T., Yool, A., & Hardingham, J. (2016). Pharmacological blockade of aquaporin-1 water channel by AqB013 restricts migration and invasiveness of colon cancer cells and prevents endothelial tube formation in vitro. *Journal of Experimental & Clinical Cancer Research*, 35(1), 31-39.
- 131.** Dreskin, S., Halsey, N., Kelso, J., Wood, R., Hummell, D., Edwards, K., Caubet, J., Engler, R., Gold, M., Ponvert, C., Demoly, P., Sanchez-Borges, M., Muraro, A., Li, J., Rottem, M., & Rosenwasser, L. (2016). International Consensus (ICON): Allergic reactions to vaccines. *World Allergy Organization Journal*, 9(1), 32.
- 132.** Dreyer, K., Lier, M., Emanuel, M., Twisk, J., Mol, B., Schats, R., Hompes, P., & Mijatovic, V. (2016). Hysteroscopic proximal tubal occlusion versus laparoscopic salpingectomy as a treatment for hydrosalpinges prior to IVF or ICSI: An RCT. *Human Reproduction*, 31(9), 2005-2016.
- 133.** Du Plessis, L., Mol, B., & Svigos, J. (2016). The use of retrievable inferior vena cava filters in pregnancy: Another successful case report, but are we actually making a difference? *Obstetric Medicine*, 9(3), 102-105.
- 134.** Duffy, J., van t Hooft, J., Gale, C., Brown, M., Grobman, W., Fitzpatrick, R., Karumanchi, S., Lucas, N., Magee, L., Mol, B., Stark, M., Thangaratnam, S., Wilson, M., von Dadelszen, P., Williamson, P., Khan, K., Ziebland, S., & McManus, R. (2016). A protocol for developing, disseminating, and implementing a core outcome set for pre-eclampsia. *Pregnancy Hypertension*, 6(4), 274-278.
- 135.** Duggan, P., & Charlin, B. (2016). Introducing recent medical graduates as members of Script Concordance Test expert reference panels: what impact? *MedEdPublish*, 5(2), 1-12.
- 136.** Duggan, P., Monnier, P., Roex, A., Bédard, M. J., & Charlin, B. (2016). Bi-cultural, bi-national benchmarking and assessment of clinical reasoning in Obstetrics and Gynaecology. *MedEdPublish*, 5(1).
- 137.** Ebert, L., Tan, L., Johan, M., Min, K., Cockshell, M., Parham, K., Betterman, K., Szeto, P., Boyle, S., Silva, L., Peng, A., Zhang, Y., Ruzskiewicz, A., Zannettino, A., Gronthos, S., Koblar, S., Harvey, N., Lopez, A., Shackleton, M., & Bonder, C. (2016). A non-canonical role for desmoglein-2 in endothelial cells: implications for neoangiogenesis. *Angiogenesis*, 19(4), 463-486.
- 138.** Eggers, S., Sadedin, S., van den Bergen, J., Robevska, G., Ohnesorg, T., Hewitt, J., Lambeth, L., Bouty, A., Knarston, I., Tan, T., Cameron, F., Werther, G., Hutson, J., O'Connell, M., Grover, S., Heloury, Y., Zacharin, M., Bergman, P., Kimber, C., Brown, J., Webb, N., Hunter, M., Srinivasan, S., Titmuss, A., Verge, C., Mowat, D., Smith, G., Smith, J.,
- Ewans, L., Shalhoub, C., Crock, P., Cowell, C., Leong, G., Ono, M., Lafferty, A., Huynh, T., Visser, U., Choong, C., McKenzie, F., Pachter, N., Thompson, E., Couper, J., Baxendale, A., Gecz, J., Wheeler, B., Jefferies, C., MacKenzie, K., Hofman, P., Carter, P., King, R., Krausz, C., van Ravenswaaij-Arts, C., Looijenga, L., Drop, S., Riedl, S., Cools, M., Dawson, A., Juniarto, A., Khadilkar, V., Khadilkar, A., Bhatia, V., Dung, V., Atta, I., Raza, J., thi Diem Chi, N., Hao, T., & Harley, V. (2016). Disorders of sex development: insights from targeted gene sequencing of a large international patient cohort. *Genome Biology*, 17(1).
- 139.** Elshorbagy, A., Jernerén, F., Samocho-Bonet, D., Refsum, H., & Heilbronn, L. (2016). Serum S-adenosylmethionine, but not methionine, increases in response to overfeeding in humans. *Nutrition and Diabetes*, 6(1).
- 140.** Ernowati, Gumilar, E., Kuntoro, Soeroso, J., & Dekker, G. (2016). Expectant management of preterm preeclampsia in Indonesia and the role of steroids. *The journal of maternal-fetal & neonatal medicine : the official journal of the European Association of Perinatal Medicine, the Federation of Asia and Oceania Perinatal Societies, the International Society of Perinatal Obstetricians*, 29(11), 1736-1740.
- 141.** Everest-Dass, A., Briggs, M., Kaur, G., Oehler, M., Hoffmann, P., & Packer, N. (2016). N-glycan MALDI imaging mass spectrometry on formalin-fixed paraffin-embedded tissue enables the delineation of ovarian cancer tissues. *Molecular and Cellular Proteomics*, 15(9), 3003-3016.
- 142.** Falster, K., Banks, E., Lujic, S., Falster, M., Lynch, J., Zwi, K., Eades, S., Leyland, A., & Jorm, L. (2016). Inequalities in pediatric avoidable hospitalizations between Aboriginal and non-Aboriginal children in Australia: A population data linkage study. *BMC Pediatrics*, 16(1), 169-169.
- 143.** Farrant, M., Williamson, K., Battin, M., Hague, W., & Rowan, J. (2016). The use of dextrose/insulin infusions during labour and delivery in women with gestational diabetes mellitus: Is there any point? *Australian and New Zealand Journal of Obstetrics and Gynaecology*.
- 144.** Farrell, L., Warin, M., Moore, V., & Street, J. (2016). Emotion in obesity discourse: understanding public attitudes towards regulations for obesity prevention. *Sociology of Health and Illness*, 38(4), 543-558.
- 145.** Farrell, L., Warin, M., Moore, V., & Street, J. (2016). Socio-economic divergence in public opinions about preventive obesity regulations: is the purpose to 'make some things cheaper, more affordable' or to 'help them get over their own ignorance'? *Social Science and Medicine*, 154(C), 1-8.
- 146.** Fernandez, R., Marino, J., Varcoe, T., Davis, S., Moran, L., Rumbold, A., Brown, H., Whitrow, M., Davies, M., & Moore, V. (2016). Fixed or rotating night shift work undertaken by women: implications for fertility and miscarriage. *Seminars in Reproductive Medicine*, 34(2), 74-82.
- 147.** Fielding, J., Levy, A., Chilver, M., Deng, Y., Regan, A., Grant, K., Stocks, N., & Sullivan,

- S. (2016). Effectiveness of seasonal influenza vaccine in Australia, 2015: an epidemiological, antigenic and phylogenetic assessment. *Vaccine*, 34(41), 4905-4912.
- 148.** Fink, N., Collins, C., Gibson, R., Makrides, M., & Penttila, I. (2016). Targeting inflammation in the preterm infant: The role of the omega-3 fatty acid docosahexaenoic acid. *Journal of Nutrition and Intermediary Metabolism*, 5(C), 55-60.
- 149.** Fink, N., Leong, L., Rogers, G., Collins, C., Gibson, R., McPhee, A., Makrides, M., & Penttila, I. (2016). The Effect Of Docosahexaenoic Acid On Immune Markers And Staphylococcus Bacteria In The Preterm Infant: A Nested Study In The N3ro Randomised Controlled Clinical Trial. *European Journal Of Pediatrics*, 175(11).
- 150.** Fitzpatrick, A., Mohammadi, F., & Jesudason, S. (2016). Managing pregnancy in chronic kidney disease: Improving outcomes for mother and baby. *International Journal of Women's Health*, 8, 273-285.
- 151.** Flenady, V., Wojcieszek, A., Fjeldheim, I., Friberg, I., Nankabirwa, V., Jani, J., Myhre, S., Middleton, P., Crowther, C., Ellwood, D., Tudehope, D., Pattinson, R., Ho, J., Matthews, J., Bermudez Ortega, A., Venkateswaran, M., Chou, D., Say, L., Mehl, G., & Froen, J. (2016). eRegistries: Indicators for the WHO Essential Interventions for reproductive, maternal, newborn and child health. *BMC Pregnancy and Childbirth*, 16(1).
- 152.** Flenady, V., Wojcieszek, A., Middleton, P., Ellwood, D., Erwich, J., Coory, M., Khong, T., Silver, R., Smith, G., Boyle, F., Lawn, J., Blencowe, H., Leisher, S., Gross, M., Horey, D., Farrales, L., Bloomfield, F., McCowan, L., Brown, S., Joseph, K., Zeitlin, J., Reinebrant, H., Ravalidi, C., Vannacci, A., Cassidy, J., Cassidy, P., Farquhar, C., Wallace, E., Siassakos, D., Heazell, A., Storey, C., Sadler, L., Petersen, S., Frøen, J., & Goldenberg, R. (2016). Stillbirths: recall to action in high-income countries. *Lancet*, 387(10019), 691-702.
- 153.** Flynn, A., Dalrymple, K., Barr, S., Poston, L., Goff, L., Rogozńska, E., Poppel, M., Rayanagoudar, G., Yeo, S., Carballo, R., Perales, M., Bogaerts, A., Cecatti, J., Dodd, J., Owens, J., Devlieger, R., Teede, H., Haakstad, L., Motahari-Tabari, N., Tonstad, S., Luoto, R., Gueffi, K., Petrella, E., Phelan, S., Scudeller, T., Hauner, H., Renault, K., Sagedal, L., Stafne, S., Vinter, C., Astrup, A., Geiker, N., McAuliffe, F., Mol, B., & Thangaratinam, S. (2016). Dietary interventions in overweight and obese pregnant women: A systematic review of the content, delivery, and outcomes of randomized controlled trials. *Nutrition Reviews*, 74(5), 312-328.
- 154.** Friez, M., Brooks, S., Stevenson, R., Field, M., Basehore, M., Adès, L., Sebald, C., McGee, S., Saxon, S., Skinner, C., Craig, M., Murray, L., Simensen, R., Yap, Y., Shaw, M., Gardner, A., Corbett, M., Kumar, R., Bosshard, M., Van Loon, B., Tarpey, P., Abidi, F., Gecz, J., & Schwartz, C. (2016). HUWE1 mutations in Juberg-Marsidi and Brooks syndromes: the results of an X-chromosome exome sequencing study. *BMJ Open*, 6(4).
- 155.** Froessler, B., Palm, P., Weber, I., Hodyl, N., Singh, R., & Murphy, E. (2016). The important role for intravenous iron in perioperative patient blood management in major abdominal surgery: a randomized controlled trial. *Annals of Surgery*, 264(1), 41-46.
- 156.** Fullston, T., & Evans, J. (2016). 'The Biggest Fertility Issue' in Special Issue 'Fertility in the 21st Century'. *Australasian Science (Magazine)*, 37(1), 23-25.
- 157.** Fullston, T., Ohlsson-Teague, E., Print, C., Sandeman, L., & Lane, M. (2016). Sperm microRNA content is altered in a mouse model of male obesity, but the same suite of microRNAs are not altered in offspring's sperm. *PLOS ONE*, 11(11).
- 158.** Fullston, T., Shehadeh, H., Schjenken, J. E., McPherson, N. O., Robertson, S. A., Zander-Fox, D., & Lane, M. (2016). Paternal Obesity and Programming of Offspring Health. In L. R. Green & R. L. Hester (Eds.), *Parental Obesity: Intergenerational Programming and Consequences* (Vol. 1, pp. 105-131). New York: Springer.
- 159.** Galletly, C. A., Clark, L. S., McFarlane, A. C., Searle, A. K., Sawyer, M. G., Sim, M. R., Baghurst, P. A., & van Hooff, M. (2016). Childhood lead exposure, childhood trauma, substance use and subclinical psychotic experiences - a longitudinal cohort study. *Psychiatry Research*, 239(C), 54-61.
- 160.** Ganchimeg, T., Nagata, C., Vogel, J. P., Morisaki, N., Pileggi-Castro, C., Ortiz-Panozo, E., Jayaratne, K., Mittal, S., Ota, E., Souza, J. P., Mori, R., Crowther, C., Maternal, W. H. O. M. S. o., & Newborn Health Research, N. (2016). Optimal timing of delivery among low-risk women with prior caesarean section: a secondary analysis of the WHO multicountry survey on maternal and newborn health. *PLOS ONE*, 11(2).
- 161.** Ganesan, A., Louise, J., Horsfall, M., Bilsborough, S., Hendriks, J., McGavigan, A., Selvanayagam, J., & Chew, D. (2016). International mobile-health intervention on physical activity, sitting, and weight: the Stepathlon cardiovascular health study. *Journal Of The American College Of Cardiology*, 67(21), 2453-2463.
- 162.** Ganesan, A. N., Louise, J., Horsfall, M., Bilsborough, S. A., Hendriks, J., McGavigan, A. D., Selvanayagam, J. B., & Chew, D. P. (2016). International Mobile-Health Intervention on Physical Activity, Sitting, and Weight The Stepathlon Cardiovascular Health Study. *Journal Of The American College Of Cardiology*, 67(21), 2453-2463.
- 163.** Garton, L., Dyda, A., Guy, R., Silver, B., McGregor, S., Hengel, B., Rumbold, A., Taylor-Thomson, D., Knox, J., Maher, L., Kaldor, J., & Ward, J. (2016). High chlamydia and gonorrhoea repeat positivity in remote Aboriginal communities 2009-2011: longitudinal analysis of testing for re-infection at 3 months suggests the need for more frequent screening. *Sexual Health*, 13(6), 568-574.
- 164.** Gialamas, A., Pilkington, R., Berry, J., Scalzi, D., Gibson, O., Brown, A., & Lynch, J. (2016). Identification of Aboriginal children using linked administrative data: consequences for measuring inequalities. *Journal of Paediatrics and Child Health*, 52(5), 534-540.
- 165.** Gibson-Helm, M., Rumbold, A., Teede, H., Ranasinha, S., Bailie, R., & Boyle, J. (2016). Improving the provision of pregnancy care for Aboriginal and Torres Strait Islander women: a continuous quality improvement initiative. *BMC Pregnancy and Childbirth*, 16(1), 118-111-118-111.
- 166.** Gilchrist, R., Luciano, A., Richani, D., Zeng, H., Wang, X., De Vos, M., Sugimura, S., Smitz, J., Richard, F., & Thompson, J. (2016). Oocyte maturation and quality: role of cyclic nucleotides. *Reproduction*, 152(5), R143-R157.
- 167.** Gold, M., Balakrishnan, M., Amarasinghe, A., & MacDonald, N. (2016). An approach to death as an adverse event following immunization. *Vaccine*, 34(2), 212-217.
- 168.** Goldsworthy, M., Hordacre, B., & Ridding, M. (2016). Minimum number of trials required for within- and between-session reliability of TMS measures of corticospinal excitability. *Neuroscience*, 320(C), 205-209.
- 169.** Goldsworthy, M., Vallence, A., Hodyl, N., Semmler, J., Pitcher, J., & Ridding, M. (2016). Probing changes in corticospinal excitability following theta burst stimulation of the human primary motor cortex. *Clinical Neurophysiology*, 127(1), 740-747.
- 170.** Goldsworthy, M., Vallence, A., Yang, R., Pitcher, J., & Ridding, M. (2016). Combined transcranial alternating current stimulation and continuous theta burst stimulation: a novel approach for neuroplasticity induction. *European Journal of Neuroscience*, 43(4), 572-579.
- 171.** Gomersall, J., Canuto, K., Aromataris, E., Braunack-Mayer, A., & Brown, A. (2016). Systematic review to inform prevention and management of chronic disease for Indigenous Australians: overview and priorities. *Australian and New Zealand Journal of Public Health*, 40(1), 22-29.
- 172.** Gomez-Lopez, N., Olson, D., & Robertson, S. (2016). Interleukin-6 controls uterine Th9 cells and CD8+ T regulatory cells to accelerate parturition in mice. *Immunology and Cell Biology*, 94(1), 79-89.
- 173.** González-Chica, D., Mnisi, Z., Avery, J., Duszynski, K., Doust, J., Tideman, P., Murphy, A., Burgess, J., Beilby, J., & Stocks, N. (2016). Effect of health literacy on quality of life amongst patients with ischaemic heart disease in Australian general practice. *PLOS ONE*, 11(3).
- 174.** Gosnell, M., Anwer, A., Mahbub, S., Menon Perinchery, S., Inglis, D., Adhikary, P., Jazayeri, J., Cahill, M., Saad, S., Pollock, C., Sutton-Mcdowall, M., Thompson, J., & Goldys, E. (2016). Quantitative non-invasive cell characterisation and discrimination based on multispectral autofluorescence features. *Scientific Reports*, 6.
- 175.** Gould, J., Anderson, A., Yelland, L., Gibson, R., & Makrides, M. (2016). Maternal characteristics influence response to DHA during pregnancy. *Prostaglandins, Leukotrienes and Essential Fatty Acids*, 108(C), 5-12.
- 176.** Gould, J., Anderson, A., Yelland, L., Smithers, L., Skeaff, C., Zhou, S., Gibson, R., & Makrides, M. (2016). Association of cord blood

- vitamin D with early childhood growth and neurodevelopment. *Journal of Paediatrics and Child Health*, 53(1).
- 177.** Gould, J., Best, K., & Makrides, M. (2016). Perinatal nutrition interventions and post-partum depressive symptoms. *Journal of Affective Disorders*, Online, 1-8.
- 178.** Gould, J., Treyvaud, K., Yelland, L., Anderson, P., Smithers, L., Gibson, R., McPhee, A., & Makrides, M. (2016). Does n-3 LCPUFA supplementation during pregnancy increase the IQ of children at school age? Follow-up of a randomised controlled trial. *BMJ Open*, 6(5).
- 179.** Gradisar, M., Jackson, K., Spurrer, N., Gibson, J., Whitham, J., Williams, A., Dolby, R., & Kennaway, D. (2016). *Behavioral interventions for infant sleep problems: A randomized controlled trial. Pediatrics*, 137(6).
- 180.** Green, M., Harvey, A., Spate, L., Kimura, K., Thompson, J., & Roberts, R. (2016). The effects of 2,4-dinitrophenol and d-glucose concentration on the development, sex ratio, and interferon-tau (IFNT) production of bovine blastocysts. *Molecular Reproduction and Development*, 83(1), 50-60.
- 573.** Grieger, J. A., Clifton, V. L., Tuck, A., Wooldridge, A. L., Robertson, S. A. & Gattford, K. L. (2016). *In utero programming of allergic susceptibility*. International Archives of Allergy and Immunology, 169:80-92.
- 181.** Grieger, J., Grzeskowiak, L., Wood, L., & Clifton, V. (2016). Asthma control in pregnancy is associated with pre-conception dietary patterns. *Public Health Nutrition*, 19(2), 332-338.
- 182.** Grieger, J. A., Wycherley, T. P., Johnson, B. J., & Golley, R. K. (2016). Discrete strategies to reduce intake of discretionary food choices: a scoping review. *International Journal of Behavioral Nutrition and Physical Activity*, 13(1).
- 183.** Grivell, R., O'Brien, C., & Dodd, J. (2016). Managing Obesity in Pregnancy: A Change in Focus from Harm Minimization to Prevention. *Seminars in Reproductive Medicine*, 34(2), e38-e46.
- 184.** Grivell, R., Yelland, L., Deussen, A., Crowther, C., & Dodd, J. (2016). Antenatal dietary and lifestyle advice for women who are overweight or obese and the effect on fetal growth and adiposity: The LIMIT randomised trial. *BJOG: An International Journal of Obstetrics and Gynaecology*, 123(2), 233-243.
- 185.** Grooten, I., Mol, B., van der Post, J., Ris-Stalpers, C., Kok, M., Bais, J., Bax, C., Duvetkot, J., Bremer, H., Porath, M., Heidema, W., Bloemkamp, K., Scheepers, H., Franssen, M., Oudijk, M., Roseboom, T., & Painter, R. (2016). Early nasogastric tube feeding in optimising treatment for hyperemesis gravidarum: The MOTHER randomised controlled trial (Maternal and Offspring outcomes after Treatment of HyperEmesis by Refeeding). *BMC Pregnancy and Childbirth*, 16(1).
- 186.** Grubor-Bauk, B., Yu, W., Wijesundara, D., Gummow, J., Garrod, T., Brennan, A., Voskoboinik, I., & Gowans, E. (2016). Intradermal delivery of DNA encoding HCV NS3 and perforin elicits robust cell-mediated immunity in mice and pigs. *Gene Therapy*, 23(1), 26-37.
- 187.** Grzeskowiak, L., McBain, R., Dekker, G., & Clifton, V. (2016). Antidepressant use in late gestation and risk of postpartum haemorrhage: a retrospective cohort study. *BJOG: An International Journal of Obstetrics and Gynaecology*, 123(12), 1929-1936.
- 188.** Grzeskowiak, L., Morrison, J., Henriksen, T., Bech, B., Obel, C., Olsen, J., & Pedersen, L. (2016). Prenatal antidepressant exposure and child behavioural outcomes at 7 years of age: a study within the Danish National Birth Cohort. *BJOG: An International Journal of Obstetrics and Gynaecology*, 123(12), 1919-1928.
- 189.** Grzeskowiak, L., Smith, B., Roy, A., Dekker, G., & Clifton, V. (2016). An observational study of the impact of an antenatal asthma management service on asthma control during pregnancy. *European Journal of Obstetrics & Gynecology and Reproductive Biology*, 197(C), 48-53.
- 190.** Grzeskowiak, L., Smith, B., Roy, A., Dekker, G., & Clifton, V. (2016). Patterns, predictors and outcomes of asthma control and exacerbations during pregnancy: A prospective cohort study. *ERS Monograph*, 2(1), 1-10.
- 191.** Gunson, J., Warin, M., & Moore, V. (2016). Visceral politics: Obesity and children's embodied experiences of food and hunger. *Critical Public Health*, 1-13.
- 192.** Gunson, J. S., Warin, M., Zivkovic, T., & Moore, V. (2016). Participant observation in obesity research with children: striated and smooth spaces. *Children's Geographies*, 14(1), 20-34.
- 193.** Gupta, D., Hull, M., Fraser, I., Miller, L., Bossuyt, P., Johnson, N., & Nisenblatt, V. (2016). Endometrial biomarkers for the non-invasive diagnosis of endometriosis. *Cochrane Database Of Systematic Reviews*, 2016(4).
- 194.** Guthridge, S., Li, L., Silburn, S., Li, S. Q., McKenzie, J., & Lynch, J. (2016). Early influences on developmental outcomes among children, at age 5, in Australia's Northern Territory. *Early Childhood Research Quarterly*, 35(C), 124-134.
- 195.** Ha, T., Sadleir, L., Mandelstam, S., Paterson, S., Scheffer, I., Gecz, J., & Corbett, M. (2016). A mutation in COL4A2 causes autosomal dominant porencephaly with cataracts. *American Journal of Medical Genetics Part A*, 170(4), 1059-1063.
- 196.** Hafekost, J., Johnson, S., Lawrence, D., Sawyer, M., Ainley, J., Mihalopoulos, C., & Zubrick, S. (2016). Introducing 'Young Minds Matter'. *Australian Economic Review*, 49(4), 503-514.
- 197.** Hafekost, J., Lawrence, D., Boterhoven de Haan, K., Johnson, S., Saw, S., Buckingham, W., Sawyer, M., Ainley, J., & Zubrick, S. (2016). Methodology of Young Minds Matter: The second Australian Child and Adolescent Survey of Mental Health and Wellbeing. *The Australian and New Zealand Journal of Psychiatry*, 50(9), 866-875.
- 198.** Han, S., Middleton, P., Tran, T., & Crowther, C. (2016). Assessing use of a printed lifestyle intervention tool by women with borderline gestational diabetes and their achievement of diet and exercise goals: A descriptive study. *BMC Pregnancy and Childbirth*, 16(1).
- 199.** Harper, R., Reynolds, A., Bonder, C., & Reynolds, P. (2016). BMP2 gene therapy for PAH acts via Smad and non-Smad signalling. *Respirology*, 21(4), 727-733.
- 200.** Harrison, C., Brown, W., Hayman, M., Moran, L., & Redman, L. (2016). The Role of Physical Activity in Preconception, Pregnancy and Postpartum Health. *Seminars in Reproductive Medicine*, 34(2), e28-e37.
- 201.** Hart, R., Doherty, D., Keelan, J., McLachlan, R., Skakkebaek, N., Norman, R., Dickinson, J., Pennell, C., Newnham, J., Hickey, M., & Handelsman, D. (2016). Early life events predict adult testicular function; Data derived from the Western Australian (Raine) birth cohort. *Journal of Clinical Endocrinology and Metabolism*, 101(9), 3333-3344.
- 202.** Hegarty, J. E., Harding, J. E., Crowther, C. A., Brown, J., & Alsweiler, J. (2016). Oral dextrose gel for the prevention of hypoglycaemia in newborn infants. *Cochrane Database Of Systematic Reviews*, 2016(4).
- 203.** Henden, L., Freytag, S., Afawi, Z., Baldassari, S., Berkovic, S., Bisulli, F., Canafoglia, L., Casari, G., Crompton, D., Depienne, C., Gecz, J., Guerrini, R., Helbig, I., Hirsch, E., Keren, B., Klein, K., Labauge, P., LeGuern, E., Licchetta, L., Mei, D., Nava, C., Pippucci, T., Rudolf, G., Scheffer, I., Striano, P., Tinuper, P., Zara, F., Corbett, M., & Bahlo, M. (2016). Identity by descent fine mapping of familial adult myoclonus epilepsy (FAME) to 2p11.2-2q11.2. *Human Genetics*, 135(10), 1117-1125.
- 204.** Herman, M., Mol, B., & Bongers, M. (2016). Diagnosis of heavy menstrual bleeding. *Women's Health*, 12(1), 15-20.
- 205.** Herman, M., Penninx, J., Geomini, P., Mol, B., & Bongers, M. (2016). Choice of primary outcomes evaluating treatment for heavy menstrual bleeding. *BJOG: An International Journal of Obstetrics and Gynaecology*, 123(10), 1593-1598.
- 206.** Hermans, F., Karolinski, A., Othenin-Girard, V., Bertolino, M., Schuit, E., Salgado, P., Hösl, I., Irion, O., Lateral, C., Mol, B., & Martinez de Tejada, B. (2016). Population differences and the effect of vaginal progesterone on preterm birth in women with threatened preterm labor. *Journal of Maternal-Fetal and Neonatal Medicine*, 29(19), 3223-3228.
- 207.** Hermans, F., Schuit, E., Opmeer, B., Oudijk, M., Bekker, M., Woiski, M., Bax, C., Sueters, M., Scheepers, H., Franssen, M., Pajkrt, E., Mol, B., & Kok, M. (2016). Effectiveness of a cervical pessary for women who did not deliver 48 h after threatened preterm labor (Assessment of perinatal outcome after specific treatment in early labor: Apostel VI trial). *BMC Pregnancy and Childbirth*, 16(1).
- 208.** Hight, A., Buckberry, S., Mayne, B., Khoda, S., Bianco-Miotto, T., & Roberts, C. (2016). First trimester trophoblasts forming

- endothelial-like tubes in vitro emulate a 'blood vessel development' gene expression profile. *Gene Expression Patterns*, 21(2), 103-110.
- 209.** Hii, C., & Ferrante, A. (2016). *The non-genomic actions of vitamin D*. *Nutrients*, 8(3):135.
- 210.** Hirsch, M., Duffy, J., Barker, C., Hummelshoj, L., Johnson, N., Mol, B., Khan, K., & Farquhar, C. (2016). Protocol for developing, disseminating and implementing a core outcome set for endometriosis. *BMJ Open*, 6(12).
- 211.** Hodyl, N., Crawford, T., McKerracher, L., Lawrence, A., Pitcher, J., & Stark, M. (2016). Antenatal steroid exposure in the late preterm period is associated with reduced cord blood neurotrophin-3. *Early Human Development*, 101(C), 57-62.
- 212.** Hodyl, N., & Muhlhauser, B. (2016). Novel insights, challenges and practical implications of DOHaD-omics research. *Medical Journal of Australia*, 204(3), 108-110.
- 213.** Hodyl, N., Roberts, C., & Bianco-Miotto, T. (2016). Cord blood DNA methylation biomarkers for predicting neurodevelopmental outcomes. *Genes*, 7(12).
- 214.** Hodyl, N., Schneider, L., Vallence, A., Clow, A., Ridding, M., & Pitcher, J. (2016). The cortisol awakening response is associated with performance of a serial sequence reaction time task. *International Journal of Psychophysiology*, 100(C), 12-18.
- 215.** Holt, P., Snelling, T., White, O., Sly, P., DeKlerk, N., Carapetis, J., Biggelaar, A., Wood, N., McIntyre, P., & Gold, M. (2016). Transiently increased IgE responses in infants and pre-schoolers receiving only acellular Diphtheria-Pertussis-Tetanus (DTaP) vaccines compared to those initially receiving at least one dose of cellular vaccine (DTwP) – Immunological curiosity or canary in the mine? *Vaccine*, 34(35), 4257-4262.
- 216.** Hordacre, B., Bradnam, L., & Crotty, M. (2016). Reorganization of the primary motor cortex following lower-limb amputation for vascular disease: a pre-post-amputation comparison. *Disability and Rehabilitation*, 39(17), 1-7.
- 217.** Hordacre, B., Goldsworthy, M., Vallence, A., Darvishi, S., Moezzi, B., Hamada, M., Rothwell, J., & Ridding, M. (2016). Variability in neural excitability and plasticity induction in the human cortex: A brain stimulation study. *Brain Stimulation*, 10(3).
- 218.** Hordacre, B., Immink, M., Ridding, M., & Hillier, S. (2016). Perceptual-motor learning benefits from increased stress and anxiety. *Human Movement Science*, 49(C), 36-46.
- 219.** Hordacre, B., Ridding, M., & Bradnam, L. (2016). The potential for non-invasive brain stimulation to improve function after amputation. *Disability and Rehabilitation*, 38(15), 1521-1532.
- 220.** Hordacre, B., Rogasch, N., & Goldsworthy, M. (2016). Commentary: Utility of EEG measures of brain function in patients with acute stroke. *Frontiers in Human Neuroscience*, 10.
- 221.** Horton, D., Saint, D., Owens, J., Kind, K., & Gatford, K. (2016). Spontaneous intrauterine growth restriction due to increased litter size in the Guinea pig programmes postnatal growth, appetite and adult body composition. *Journal of Developmental Origins of Health and Disease*, 7(5), 548-562.
- 222.** Hu, H., Haas, S., Chelly, J., Van Esch, H., Raynaud, M., De Brouwer, A., Weinert, S., Froyen, G., Frints, S., Laumonier, F., Zemojtel, T., Love, M., Richard, H., Emde, A., Bienek, M., Jensen, C., Hambrock, M., Fischer, U., Langnick, C., Feldkamp, M., Wissink-Lindhout, W., Lebrun, N., Castelnaud, L., Rucci, J., Montjean, R., Dorseuil, O., Billuart, P., Stuhlmann, T., Shaw, M., Corbett, M., Gardner, A., Willis-Owen, S., Tan, C., Friend, K., Belet, S., Van Roozendaal, K., Jimenez-Pocquet, M., Moizard, M., Ronce, N., Sun, R., O'Keeffe, S., Chenna, R., Van Bömmel, A., Göke, J., Hackett, A., Field, M., Christie, L., Boyle, J., Haan, E., Nelson, J., Turner, G., Baynam, G., Gillissen-Kaesbach, G., Müller, U., Steinberger, D., Budny, B., Badura-Stronka, M., Latos-Bieleńska, A., Ousager, L., Wieacker, P., Rodríguez Criado, G., Bondeson, M., Annerén, G., Dufke, A., Cohen, M., Van Maldergem, L., Vincent-Delorme, C., Echenne, B., Simon-Bouy, B., & Kleefstra, T. (2016). X-exome sequencing of 405 unresolved families identifies seven novel intellectual disability genes. *Molecular Psychiatry*, 21(1), 133-148.
- 223.** Hudson, I. L., Leemaqz, S. Y., Kim, S. W., Darwent, D., Roach, G., & Dawson, D. (2016). SOM clustering and modelling of Australian railway drivers' sleep, wake, duty profiles. In S. Shanmuganathan & S. Samarasinghe (Eds.), *Studies in Computational Intelligence* (pp. 235-279). *Switzerland: Springer*.
- 224.** Hudson, I. L., Leemaqz, S. Y., Neffe, A. T., & Abell, A. D. (2016). Classifying calpain inhibitors for the treatment of cataracts: A self organising map (SOM) ANN/KM approach in drug discovery. In S. Shanmuganathan & S. Samarasinghe (Eds.), *Artificial Neural Network Modelling* (Vol. 1, pp. 161-212). *Switzerland: Springer*.
- 225.** Hughes, J., Aubert, M., Heatlie, J., Gardner, A., Gecz, J., Morgan, T., Belsky, J., & Thomas, P. (2016). Identification of an IGSF1-specific deletion in a five-generation pedigree with X-linked Central Hypothyroidism without macroorchidism. *Clinical Endocrinology*, 85(4), 609-615.
- 226.** Hunter, D., Hazel, S., Kind, K., Liu, H., Marini, D., Giles, L., De Blasio, M., Owens, J., Pitcher, J., & Gatford, K. (2016). Effects of induced placental and fetal growth restriction, size at birth and early neonatal growth on behavioural and brain structural lateralization in sheep. *Laterality*, 1-30.
- 227.** Hunter, D., Hazel, S., Kind, K., Owens, J., Pitcher, J., & Gatford, K. (2016). Programming the brain: common outcomes and gaps in knowledge from animal studies of IUGR. *Physiology & Behavior*, 164, 233-248.
- 228.** Huo, C., Huang, D., Chew, G., Hill, P., Vohora, A., Ingman, W., Glynn, D., Godde, N., Henderson, M., Thompson, E., & Britt, K. (2016). Human glandular organoid formation in murine engineering chambers after collagenase digestion and flow cytometry isolation of normal human breast tissue single cells. *Cell Biology International*, 40(11), 1212-1223.
- 229.** Hutchison, A., & Heilbronn, L. (2016). Metabolic impacts of altering meal frequency and timing - does when we eat matter? *Biochimie*, 124(C), 187-197.
- 230.** Iacoponi, S., Rubio, P., Garcia, E., Oehler, M. K., Diez, J., Diaz-De La Noval, B., Mora, P., Gardella, B., Gomez, I., Kotsopoulos, I. C., Zalewski, K., & Zapardiel, I. (2016). Prognostic factors of recurrence and survival in vulvar melanoma. *International Journal of Gynecological Cancer*, 26(7), 1307-1312.
- 231.** Ibiebele, I., Coory, M., Smith, G., Boyle, F., Vlack, S., Middleton, P., Roe, Y., & Flenady, V. (2016). Gestational age specific stillbirth risk among Indigenous and non-Indigenous women in Queensland, Australia: a population based study. *BMC Pregnancy and Childbirth*, 16(1), 159-151-159-158.
- 232.** Ivancevic, A. M., Kortschak, R. D., Bertozzi, T., & Adelson, D. L. (2016). LINEs between Species: Evolutionary Dynamics of LINE-1 Retrotransposons across the Eukaryotic Tree of Life. *Genome Biology And Evolution*, 8(11), 3301-3322.
- 233.** Jacobi-Polishook, T., Collins, C., Sullivan, T., Simmer, K., Gillman, M., Gibson, R., Makrides, M., & Belfort, M. (2016). Human milk intake in preterm infants and neurodevelopment at 18 months corrected age. *Pediatric Research*, 80(4), 486-492.
- 234.** Jeffs, L., Nitschke, J., Tervaert, J., Peh, C., & Hurtado, P. (2016). Viral RNA in the influenza vaccine may have contributed to the development of ANCA-associated vasculitis in a patient following immunisation. *Clinical Rheumatology*, 35(4), 943-951.
- 235.** Johnson, S., Lawrence, D., Hafekost, J., Saw, S., Buckingham, W., Sawyer, M., Ainley, J., & Zubrick, S. (2016). Service use by Australian children for emotional and behavioural problems: findings from the second Australian Child and Adolescent Survey of Mental Health and Wellbeing. *The Australian and New Zealand Journal of Psychiatry*, 50(9), 887-898.
- 236.** Jones, M., Cargo, M., Warin, M., & Verity, F. (2016). OPALesence: Epistemological pluralism in the evaluation of a systems-wide childhood obesity prevention program. *Evaluation International Journal of Theory Research and Practice*, 22(1), 29-48.
- 237.** Jureidini, J. (2016). Antidepressants fail, but no cause for therapeutic gloom. *The Lancet*, 388(10047), 844-845.
- 238.** Jureidini, J., Amsterdam, J., & McHenry, L. (2016). The citalopram CIT-MD-18 pediatric depression trial: Deconstruction of medical ghostwriting, data mischaracterisation and academic malfeasance. *International Journal of Risk and Safety in Medicine*, 28(1), 33-43.
- 239.** Karageorgos, L., Hein, L., Rozaklis, T., Adams, M., Duplock, S., Snel, M., Hemsley, K., Kuchel, T., Smith, N., & Hopwood, J. (2016). Glycosphingolipid analysis in a naturally occurring ovine model of acute neuronopathic Gaucher disease. *Neurobiology of Disease*,

91(C), 143-154.

240. Kaur, M., Wooldridge, A., Wilkes, M., Pitchford, W., Hynd, P., McConell, G., & Gattford, K. (2016). Placental restriction in multi-fetal pregnancies increases spontaneous ambulatory activity during daylight hours in young adult female sheep. *Journal of Developmental Origins of Health and Disease*, 7(5), 525-537.

241. Kazemier, B., Miller, E., Grobman, W., & Mol, B. (2016). Variation in preterm birth rate and the role of short cervical length across two populations: A comparative cohort study. *Journal of Perinatology*, 36(7), 516-521.

242. Keage, H. A., Muniz, G., Kurylowicz, L., Van Hooff, M., Clark, L., Searle, A. K., Sawyer, M. G., Baghurst, P., & McFarlane, A. (2016). Age 7 intelligence and paternal education appear best predictors of educational attainment: the Port Pirie Cohort Study. *Australian Journal of Psychology*, 68(1), 61-69.

243. Keage, H. A. D., Muniz, G., Kurylowicz, L., Van Hooff, M., Clark, L., Searle, A. K., Sawyer, M., Baghurst, P., & McFarlane, A. (2016). Age seven intelligence and paternal education appear best predictors of educational attainment: The Port Pirie Cohort Study. *Australian Journal of Psychology*, 68(1), 61-69.

244. Keir, A., Froessler, B., & Stanworth, S. (2016). Are intravenous fluid boluses beneficial in late preterm or term infants with suspected haemodynamic compromise? *Archives of Disease in Childhood*, 101(2), 201-202.

245. Keir, A., Pal, S., Trivella, M., Lieberman, L., Callum, J., Shehata, N., & Stanworth, S. (2016). Adverse effects of red blood cell transfusions in neonates: a systematic review and meta-analysis. *Transfusion*, 56(11), 2773-2780.

246. Keir, A., & Stanworth, S. (2016). Neonatal Plasma Transfusion: An Evidence-Based Review. *Transfusion Medicine Reviews*, 30(4), 174-182.

247. Keir, A., Wilkinson, D., Andersen, C., & Stark, M. (2016). Washed versus unwashed red blood cells for transfusion for the prevention of morbidity and mortality in preterm infants. *Cochrane Database Of Systematic Reviews*, 2016(1).

248. Kentish, S., Vincent, A., Kennaway, D., Wittert, G., & Page, A. (2016). High-fat diet-induced obesity ablates gastric vagal afferent circadian rhythms. *Journal of Neuroscience*, 36(11), 3199-3207.

249. Kerr, R., Eckert, L., Winikoff, B., Durocher, J., Meher, S., Fawcus, S., Mundle, S., Mol, B., Arulkumaran, S., Khan, K., Wandwabwa, J., Kochhar, S., & Weeks, A. (2016). Postpartum haemorrhage: Case definition and guidelines for data collection, analysis, and presentation of immunization safety data. *Vaccine*, 34(49), 6102-6109.

250. Kersten, F., Hermens, R., Braat, D., Tepe, E., Sluijmer, A., Kuchenbecker, W., Van Den Boogaard, N., Mol, B., Goddijn, M., & Nelen, W. (2016). Tailored expectant management in couples with unexplained infertility does not influence their experiences with the quality of fertility care. *Human Reproduction*, 31(1),

108-116.

251. Kindinger, L., Poon, L., Cacciatori, S., MacIntyre, D., Fox, N., Schuit, E., Mol, B., Liem, S., Lim, A., Serra, V., Perales, A., Hermans, F., Darzi, A., Bennett, P., Nicolaidis, K., & Teoh, T. (2016). The effect of gestational age and cervical length measurements in the prediction of spontaneous preterm birth in twin pregnancies: An individual patient level meta-analysis. *BJOG: An International Journal of Obstetrics and Gynaecology*, 123(6), 877-884.

252. King, S., & Teague, W. (2016). An Unusual Passage of a Nasogastric Tube in Esophageal Atresia. *Journal of Pediatrics*, 171(C), 319.

253. Kleinrouweler, C., Cheong-See Mrcog, F., Collins, G., Kwee, A., Thangaratnam, S., Khan, K., Mol, B., Pajkrt, E., Moons, K., & Schuit, E. (2016). Prognostic models in obstetrics: available, but far from applicable. *American Journal Of Obstetrics And Gynecology*, 214(1), 79-90.

254. Ko, H., Teede, H., & Moran, L. (2016). Analysis of the barriers and enablers to implementing lifestyle management practices for women with PCOS in Singapore. *BMC Research Notes*, 9(1), 311-311.

255. Kolding, L., Pedersen, L. H., Henriksen, T. B., Olsen, J., & Grzeskowiak, L. E. (2016). Erratum to "Hypericum perforatum use during pregnancy and pregnancy outcome" [Reprod. Toxicol. (2015) 234-237]. *Reproductive Toxicology*, 59(C), 183.

256. Koolen, D., Pfundt, R., Linda, K., Beunders, G., Veenstra-Knol, H., Conta, E., Fortuna, A., Gillessen-Kaesbach, G., Dugan, S., Halbach, S., Abdul-Rahman, O., Winesett, H., Chung, W., Dalton, M., Dimova, P., Mattina, T., Prescott, K., Zhang, H., Saal, H., Hehir-Kwa, J., Willemsen, M., Ockeloen, C., Jongmans, M., Van Der Aa, N., Failla, P., Barone, C., Avola, E., Brooks, A., Kant, S., Gerkes, E., Firth, H., Unap, K., Bird, L., Masser-Frye, D., Friedman, J., Sokunbi, M., Dixit, A., Splitt, M., Kukolich, M., McLaughran, J., Coe, B., Flórez, J., Nadif Kasr, N., Brunner, H., Thompson, E., Gecz, J., Romano, C., Eichler, E., & De Vries, B. (2016). The Koolen-de Vries syndrome: a phenotypic comparison of patients with a 17q21.31 microdeletion versus a KANSL1 sequence variant. *European Journal of Human Genetics*, 24(5), 652-659.

257. Kooltheat, N., Kamuthachad, L., Anthapanya, M., Samakchan, N., Sranujit, R., Potup, P., Ferrante, A., & Usuwanthim, K. (2016). Kaffir lime leaves extract inhibits biofilm formation by *Streptococcus mutans*. *Nutrition*, 32(4), 486-490.

258. Koullali, B., Oudijk, M., Nijman, T., Mol, B., & Pajkrt, E. (2016). Risk assessment and management to prevent preterm birth. *Seminars in Fetal and Neonatal Medicine*, 21(2), 80-88.

259. Kremer, K., Smith, A., Sandeman, L., Inglis, J., Ridding, M., & Koblar, S. (2016). Transcranial magnetic stimulation of human adult stem cells in the mammalian brain. *Frontiers in Neural Circuits*, 10(MAR).

260. Krishnan, A., Wong, G., Chapman, J., Coates, P., Russ, G., Pleass, H., Russell, C.,

He, B., & Lim, W. (2016). Prolonged Ischemic Time, Delayed Graft Function, and Graft and Patient Outcomes in Live Donor Kidney Transplant Recipients. *American Journal of Transplantation*, 16(9), 2714-2723.

261. Kubeil, C., Yeung, J. C. I., Tuckey, R. C., Rodgers, R. J., & Martin, L. L. (2016). Membrane-mediated protein-protein interactions of cholesterol side-chain cleavage cytochrome P450 with its associated electron transport proteins. *ChemPlusChem*, 81(9), 995-1002.

262. Kumar, R., Ha, T., Pham, D., Shaw, M., Mangelsdorf, M., Friend, K., Hobson, L., Turner, G., Boyle, J., Field, M., Hackett, A., Corbett, M., & Gecz, J. (2016). A non-coding variant in the 5' UTR of DLG3 attenuates protein translation to cause non-syndromic intellectual disability. *European Journal of Human Genetics*, 24(11), 1612-1616.

263. Kumar, S., Tomita, Y., Wrin, J., Bruhn, M., Swalling, A., Mohammed, M., Price, T., & Hardingham, J. (2016). High early growth response 1 (EGR1) expression correlates with resistance to anti-EGFR treatment in vitro and with poorer outcome in metastatic colorectal cancer patients treated with cetuximab. *Clinical and Translational Oncology*, 19(6), 1-9.

264. Kyle, S., Saha, P., Brown, H., Chan, L., & Justice, M. (2016). MeCP2 co-ordinates liver lipid metabolism with the NCoR1/HDAC3 corepressor complex. *Human Molecular Genetics*, 25(14), 3029-3041.

265. Lakhan, N., Clarke, M., Mathew, S., & Marshall, H. (2016). Retrospective review of factors associated with severe hospitalised community-acquired influenza in a tertiary paediatric hospital in South Australia. *Influenza and other Respiratory Viruses*, 10(6), 479-485.

266. Lakhan, N., Stevens, N., Diener, K., & Hayball, J. (2016). CoVaccine HT™ adjuvant is superior to Freund's adjuvants in eliciting antibodies against the endogenous alarmin HMGB1. *Journal of Immunological Methods*, 439, 37-43.

267. Langendijk, P., Chen, T., McIlfratrick, S., & Nottle, M. (2016). Energy balance influences number of ovulations rather than embryo quality in the pig. *Theriogenology*, Online(4), 1-6.

268. Lassi, Z., Middleton, P., Bhutta, Z., & Crowther, C. (2016). Strategies for improving health care seeking for maternal and newborn illnesses in low- and middle-income countries: a systematic review and meta-analysis. *Global Health Action*, 9(1), 1-13.

269. Lassi, Z., Middleton, P., Bhutta, Z., & Crowther, C. (2016). Strategies for improving health care seeking for maternal and newborn illnesses in low- and middle-income countries: A systematic review and meta-analysis. *Global Health Action*, 9(1), 1-13.

270. Lassi, Z., Moin, A., & Bhutta, Z. (2016). Zinc supplementation for the prevention of pneumonia in children aged 2 months to 59 months. *Cochrane Database Of Systematic Reviews*, 2016(12).

271. Lassi, Z., Musavi, N., Maliqi, B., Mansoor, N., de Francisco, A., Toure, K., & Bhutta, Z.

- (2016). Systematic review on human resources for health interventions to improve maternal health outcomes: Evidence from low- and middle-income countries. *Human Resources for Health*, 14(1), 1-20.
- 272.** Lassi, Z. S., Moin, A., & Bhutta, Z. A. (2016). Zinc supplementation for the prevention of pneumonia in children aged 2 months to 59 months. *The Cochrane database of systematic reviews*, 12, CD005978.
- 273.** Lawrence, D., Hafekost, J., Johnson, S., Saw, S., Buckingham, W., Sawyer, M., Ainley, J., & Zubrick, S. (2016). Key findings from the second Australian Child and Adolescent Survey of Mental Health and Wellbeing. *The Australian and New Zealand Journal of Psychiatry*, 50(9), 876-886.
- 274.** Lawrence, R., Brown, J., Middleton, P., Shepherd, E., Brown, S., & Crowther, C. (2016). Interventions for preventing gestational diabetes mellitus: An overview of Cochrane Reviews. *Cochrane Database Of Systematic Reviews*, 2016(10).
- 275.** Le Noury, J., Nardo, J., Healy, D., Jureidini, J., Raven, M., Tufanaru, C., & Abi-Jaoude, E. (2016). Study 329 continuation phase: Safety and efficacy of paroxetine and imipramine in extended treatment of adolescent major depression. *International Journal of Risk and Safety in Medicine*, 28(3), 143-161.
- 276.** Leemaqz, S., Dekker, G., McCowan, L., Kenny, L., Myers, J., Simpson, N., Poston, L., & Roberts, C. (2016). Maternal marijuana use has independent effects on risk for spontaneous preterm birth but not other common late pregnancy complications. *Reproductive Toxicology*, 62(C), 77-86.
- 277.** Lei, Y., Carlson, S., Yelland, L., Makrides, M., Gibson, R., & Gajewski, B. (2016). Comparison of dichotomized and distributional approaches in rare event clinical trial design: a fixed Bayesian design. *Journal of Applied Statistics*, 44(8), 1466-1478.
- 278.** Lemmers, M., Verschoor, M., Hooker, A., Opmeer, B., Limpens, J., Huirne, J., Ankum, W., & Mol, B. (2016). Dilatation and curettage increases the risk of subsequent preterm birth: A systematic review and meta-analysis. *Human Reproduction*, 31(1), 34-45.
- 279.** Lemmers, M., Verschoor, M., Oude Rengerink, K., Naaktgeboren, C., Opmeer, B., Bossuyt, P., Huirne, J., Janssen, C., Radder, C., Klinkert, E., Langenveld, J., Catshoek, R., Van Der Voet, L., Siemens, F., Geomini, P., Van Hooff, M., Van Der Ploeg, J., Coppus, S., Ankum, W., & Mol, B. (2016). MisoREST: Surgical versus expectant management in women with an incomplete evacuation of the uterus after misoprostol treatment for miscarriage: A randomized controlled trial. *Human Reproduction*, 31(11), 2421-2427.
- 280.** Leushuis, E., Wetzels, A., van der Steeg, J. W., Steures, P., Bossuyt, P. M., van Trooyen, N., Repping, S., van der Horst, F. A., Hompes, P. G., Mol, B. W., & van der Veen, F. (2016). Reducing Inter-Laboratory Differences between Semen Analyses Using Z Score and Regression Transformations. *International Journal of Fertility and Sterility*, 9(4), 534-540.
- 281.** Li, H., Sutton-McDowall, M., Wang, X., Sugimura, S., Thompson, J., & Gilchrist, R. (2016). Extending prematuration with cAMP modulators enhances the cumulus contribution to oocyte antioxidant defence and oocyte quality via gap junctions. *Human Reproduction*, 31(4), 810-821.
- 282.** Liapis, V., Zinonos, I., Labrinidis, A., Hay, S., Ponomarev, V., Panagopoulos, V., Zysk, A., DeNichilo, M., Ingman, W., Atkins, G., Findlay, D., Zannettino, A., & Evdokiou, A. (2016). Anticancer efficacy of the hypoxia-activated prodrug evofosfamide (TH-302) in osteolytic breast cancer murine models. *Cancer Medicine*, 5(3), 534-545.
- 283.** Lie, S., Morrison, J., Williams-Wyss, O., Suter, C., Humphreys, D., Ozanne, S., Zhang, S., Maclaughlin, S., Kleemann, D., Walker, S., Roberts, C., & McMillen, I. (2016). Impact of maternal undernutrition around the time of conception on factors regulating hepatic lipid metabolism and microRNAs in singleton and twin fetuses. *American Journal of Physiology: Endocrinology and Metabolism*, 310(2), E148-E159.
- 284.** Lieberman, L., Spradbrow, J., Keir, A., Dunn, M., Lin, Y., & Callum, J. (2016). Use of intravenous immunoglobulin in neonates at a tertiary academic hospital: a retrospective 11-year study. *Transfusion*, 56(11), 2704-2711.
- 285.** Liem, S., Schuit, E., Van Pampus, M., Van Melick, M., MonFrance, M., Langenveld, J., Mol, B., & Bekeedam, D. (2016). Cervical pessaries to prevent preterm birth in women with a multiple pregnancy: A per-protocol analysis of a randomized clinical trial. *Acta Obstetrica et Gynecologica Scandinavica*, 95(4), 444-451.
- 286.** Lim, W., McDonald, S., Coates, P., Chapman, J., Russ, G., & Wong, G. (2016). Maternal compared with paternal donor kidneys are associated with poorer graft outcomes after kidney transplantation. *Kidney International*, 89(3), 659-665.
- 287.** Lim, W. H., Chapman, J. R., Coates, P. T., Lewis, J. R., Russ, G. R., Watson, N., Holdsworth, R., & Wong, G. (2016). HLA-DQ Mismatches and Rejection in Kidney Transplant Recipients. *Clinical Journal Of The American Society Of Nephrology*, 11(5), 875-883.
- 288.** Ling, K., Brautigan, P., Moore, S., Fraser, R., Cheah, P., Raison, J., Babic, M., Lee, Y., Daish, T., Mattiske, D., Mann, J., Adelson, D., Thomas, P., Hahn, C., & Scott, H. (2016). Derivation of an endogenous small RNA from double-stranded Sox4 sense and natural antisense transcripts in the mouse brain. *Genomics*, 107(2-3), 88-99.
- 289.** Ling, K., Brautigan, P., Moore, S., Fraser, R., Leong, M., Leong, J., Zainal Abidin, S., Lee, H., Cheah, P., Raison, J., Babic, M., Lee, Y., Daish, T., Mattiske, D., Mann, J., Adelson, D., Thomas, P., Hahn, C., & Scott, H. (2016). In depth analysis of the Sox4 gene locus that consists of sense and natural antisense transcripts. *Data in Brief*, 7(C), 282-290.
- 290.** Lizarondo, L., Pham, C., Aromataris, E., Munn, Z., Gibb, C., & Karnon, J. (2016). Strategies for implementing shared decision making in elective surgery by healthcare practitioners: a systematic review protocol. *JBI Database System Rev Implement Rep*, 14(12), 100-108.
- 291.** Loh, Y., Tan, S., Kwok, M., Stark, M., & Marks, D. (2016). Reduction of biological response modifiers in the supernatant of washed paediatric red blood cells. *Vox Sanguinis*, 111(4), 365-373.
- 292.** Lokman, N., Pyragius, C., Ruszkiewicz, A., Oehler, M., & Ricciardelli, C. (2016). Annexin A2 and S100A10 are independent predictors of serous ovarian cancer outcome. *Translational Research*, 171(C), 83-95.
- 293.** Lovato, N., Lack, L., & Kennaway, D. J. (2016). Comparing and contrasting therapeutic effects of cognitive-behavior therapy for older adults suffering from insomnia with short and long objective sleep duration. *Sleep Medicine*, 22(C), 4-12.
- 294.** Lovato, N., Micic, G., Gradisar, M., Ferguson, S. A., Burgess, H. J., Kennaway, D. J., & Lack, L. (2016). Can the circadian phase be estimated from self-reported sleep timing in patients with Delayed Sleep Wake Phase Disorder to guide timing of chronobiologic treatment? *Chronobiology International*, 33(10), 1376-1390.
- 295.** Luscombe-Marsh, N., Hutchison, A., Soenen, S., Steinert, Clifton, Horowitz, & Feinle, B. (2016). Plasma free amino acid responses to intraduodenal whey protein and relationships with insulin, glucagon-like peptide-1 and energy intake in lean healthy men. *Nutrients*, 8(1).
- 296.** Luszcz, M., Giles, L., Anstey, K., Browne-Yung, K., Walker, R., & Windsor, T. (2016). Cohort profile: The Australian Longitudinal Study of Ageing (ALSA). *International Journal of Epidemiology*, 45(4), 1054-1063.
- 297.** MacIntyre, C., Shaw, P., Mackie, F., Boros, C., Marshall, H., Barnes, M., Seale, H., Kennedy, S., Moa, A., Hayen, A., Chughtai, A., O'Loughlin, E., & Stormon, M. (2016). Immunogenicity and persistence of immunity of a quadrivalent Human Papillomavirus (HPV) vaccine in immunocompromised children. *Vaccine*, 34(36), 4343-4350.
- 298.** Maclennan, A., Thompson, S., & Gecz, J. (2016). Reply. *American Journal Of Obstetrics And Gynecology*, 214(5), 671.
- 299.** Madden, K., Middleton, P., Cyna, A., Matthewson, M., & Jones, L. (2016). Hypnosis for pain management during labour and childbirth. *Cochrane Database Of Systematic Reviews*, 2016(5).
- 300.** Magee, L. A., von Dadelszen, P., Singer, J., Lee, T., Rey, E., Ross, S., Asztalos, E., Murphy, K. E., Menzies, J., Sanchez, J., Gafni, A., Helewa, M., Hutton, E., Koren, G., Lee, S. K., Logan, A. G., Ganzevoort, W., Welch, R., Thornton, J. G., & Moutquin, J. M. (2016). The CHIPS Randomized Controlled Trial (Control of Hypertension in Pregnancy Study) Novelty and Significance. *Hypertension*, 68(5), 1153-1159.
- 301.** Makrides, M. (2016). Understanding the effects of docosahexaenoic acid (DHA) supplementation during pregnancy on multiple outcomes from the DOMInO trial. OCL - Oilseeds and fats, *Crops and Lipids*, 23(1).
- 302.** Makrides, M., & Best, K. (2016).

- Docosahexaenoic acid and preterm birth. *Annals of Nutrition and Metabolism*, 69, 30-34.
- 303.** Makrides, M., & Bhatia, J. (2016). Editorial. *Annals of Nutrition and Metabolism*, 69(1), 5-6.
- 304.** Malek, L., Umberger, W., Makrides, M., & Zhou, S. (2016). Adherence to the Australian dietary guidelines during pregnancy: evidence from a national study. *Public Health Nutrition*, 19(7), 1155-1163.
- 305.** Malek, L., Umberger, W., Makrides, M., & Zhou, S. (2016). Poor adherence to folic acid and iodine supplement recommendations in preconception and pregnancy: a cross-sectional analysis. *Australian and New Zealand Journal of Public Health*, 40(5), 424-429.
- 306.** Marshall, H., Chen, G., Clarke, M., & Ratcliffe, J. (2016). Adolescent, parent and societal preferences and willingness to pay for meningococcal B vaccine: A Discrete Choice Experiment. *Vaccine*, 34(5), 671-677.
- 307.** Marshall, H., McMillan, M., Andrews, R., Macartney, K., & Edwards, K. (2016). Vaccines in pregnancy: the dual benefit for pregnant women and infants. *Human Vaccines and Immunotherapeutics*, 12(4), 848-856.
- 308.** Marshall, H., Nissen, M., Richmond, P., Shakib, S., Jiang, Q., Cooper, D., Rill, D., Baber, J., Eiden, J., Gruber, W., Jansen, K., Anderson, A., Zito, E., & Girgenti, D. (2016). Safety and immunogenicity of a booster dose of a 3-antigen *Staphylococcus aureus* vaccine (SA3Ag) in healthy adults: A randomized phase 1 study. *Journal of Infection*, 73(5), 437-454.
- 309.** Marshall, H., Wang, B., Wesselingh, S., Snape, M., & Pollard, A. (2016). Control of invasive meningococcal disease: Is it achievable? *International Journal of Evidence-Based Healthcare*, 14(1), 3-12.
- 310.** Martin, J., Zhou, S., Flynn, A., Malek, L., Greco, R., & Moran, L. (2016). The Assessment of Diet Quality and Its Effects on Health Outcomes Pre-pregnancy and during Pregnancy. *Seminars in Reproductive Medicine*, 34(2), 83-92.
- 311.** Martis, R., Brown, J., Alswelker, J., Crawford, T., & Crowther, C. (2016). Different intensities of glycaemic control for women with gestational diabetes mellitus. *Cochrane Database Of Systematic Reviews* (4).
- 312.** Martis, R., Brown, J., Alswelker, J., Downie, M., & Crowther, C. (2016). Treatments for women with gestational diabetes mellitus: An overview of Cochrane systematic reviews. *Cochrane Database Of Systematic Reviews*, 2016(8).
- 313.** Mate, K., Magin, P., Brodaty, H., Stocks, N., Gunn, J., Disler, P., Marley, J., & Pond, C. (2016). An evaluation of the additional benefit of population screening for dementia beyond a passive case-finding approach. *International Journal of Geriatric Psychiatry*, 32(3).
- 314.** Mattiske, T., Lee, K., Gecz, J., Friocourt, G., & Shoubridge, C. (2016). Embryonic forebrain transcriptome of mice with polyalanine expansion mutations in the ARX homeobox gene. *Human Molecular Genetics*, 25(24), 5433-5443.
- 315.** Mayne, B., Bianco-Miotto, T., Buckberry, S., Breen, J., Clifton, V., Shoubridge, C., & Roberts, C. (2016). Large scale gene expression meta-analysis reveals tissue-specific, sex-biased gene expression in humans. *Frontiers in Genetics*, 7, 183-183.
- 316.** Mayne, B., Leemaqz, S., Buckberry, S., Breen, J., Bianco-Miotto, T., & Roberts, C. (2016). Sex differences in the human placental methylome. *Clinical Endocrinology*, 84, 48-48.
- 317.** Mayne, B., Leemaqz, S., Smith, A., Breen, J., Roberts, C., & Bianco-Miotto, T. (2016). Accelerated placental aging in early onset preeclampsia pregnancies identified by DNA methylation. *Epigenomics*, 9(3), 279-289.
- 318.** McBain, R., Dekker, G., Clifton, V., Mol, B., & Grzeskowiak, L. (2016). Impact of inter-pregnancy BMI change on perinatal outcomes: a retrospective cohort study. *European Journal of Obstetrics Gynecology and Reproductive Biology*, 205(C), 98-104.
- 319.** McBride, W., Abhayaratna, W., Barr, I., Booy, R., Carapetis, J., Carson, S., De Looze, F., Ellis-Pegler, R., Heron, L., Karrasch, J., Marshall, H., McVernon, J., Nolan, T., Rawlinson, W., Reid, J., Richmond, P., Shakib, S., Bassler, R., Hartel, G., Lai, M., Rockman, S., & Greenberg, M. (2016). Efficacy of a trivalent influenza vaccine against seasonal strains and against 2009 pandemic H1N1: A randomized, placebo-controlled trial. *Vaccine*, 34(41), 4991-4997.
- 320.** McCarron, A., Donnelley, M., McIntyre, C., & Parsons, D. (2016). Challenges of up-scaling lentivirus production and processing. *Journal of Biotechnology*, 240, 23-30.
- 321.** McGoldrick, E., Brown, J., Middleton, P., McKinlay, C. J., Haas, D. M., & Crowther, C. A. (2016). Antenatal corticosteroids for fetal lung maturation: An overview of Cochrane reviews. *Cochrane Database Of Systematic Reviews*, 2016(4).
- 322.** McLennan, H., Tuke, J., & Breed, W. (2016). The Gerbil Spermatozoon – interspecific variation in morphology does not invariably follow murine rodent evolutionary trends in response to predicted intermale sperm competition. *Acta Zoologica*, 97(3), 361-369.
- 323.** McPherson, N., Fullston, T., Kang, W., Sandeman, L., Corbett, M., Owens, J., & Lane, M. (2016). Paternal under-nutrition programs metabolic syndrome in offspring which can be reversed by antioxidant/vitamin food fortification in fathers. *Scientific Reports*, 6, 1-14.
- 324.** Mehr, S., Allen, R., Boros, C., Adib, N., Kakakios, A., Turner, P., Rogers, M., Zurynski, Y., & Singh-Grewal, D. (2016). Cryopyrin-associated periodic syndrome in Australian children and adults: Epidemiological, clinical and treatment characteristics. *Journal of Paediatrics and Child Health*, 52(9), 889-895.
- 325.** Mengerink, B., Van Leijsen, S., Vierhout, M., Inthout, J., Mol, B., Milani, A., Roovers, J., Van Eijndhoven, H., Van Der Vaart, C., Van Gestel, I., Hartog, F., Heesakkers, J., & Kluivers, K. (2016). The Impact of Midurethral Sling Surgery on Sexual Activity and Function in Women With Stress Urinary Incontinence. *Journal of Sexual Medicine*, 13(10), 1498-1507.
- 326.** Metcalfe, J., D'Vaz, N., Makrides, M., Gold, M., Quinn, P., West, C., Loh, R., Prescott, S., & Palmer, D. (2016). Elevated IL-5 and IL-13 responses to egg proteins predate the introduction of egg in solid foods in infants with eczema. *Clinical and Experimental Allergy*, 46(2), 308-316.
- 327.** Middleton, P., Bubner, T., Glover, K., Rumbold, A., Weetra, D., Scheil, W., & Brown, S. (2016). 'Partnerships are crucial': An evaluation of the Aboriginal Family Birthing Program in South Australia. *Australian and New Zealand Journal of Public Health*, 41(1).
- 328.** Middleton, P., Crowther, C., & Simmonds, L. (2016). Different intensities of glycaemic control for pregnant women with pre-existing diabetes. *Cochrane Database Of Systematic Reviews*, 2016(5).
- 329.** Milazzo, A., Giles, L., Zhang, Y., Koehler, A., Hiller, J., & Bi, P. (2016). Heatwaves differentially affect risk of *Salmonella* serotypes. *Journal of Infection*, 73(3), 231-240.
- 330.** Miller, L., Hodgson, R., Wong, T., Merrilees, M., Norman, R., & Johnson, N. (2016). Single embryo transfer for all? *Australian and New Zealand Journal of Obstetrics and Gynaecology*, 56(5), 514-517.
- 331.** Mittal, P., Klingler-Hoffmann, M., Arentz, G., Winderbaum, L., Kaur, G., Anderson, L., Scurry, J., Leung, Y., Stewart, C., Carter, J., Hoffmann, P., & Oehler, M. (2016). Annexin A2 and alpha actinin 4 expression correlates with metastatic potential of primary endometrial cancer. *Biochim Biophys Acta*.
- 332.** Mittal, P., Klingler-Hoffmann, M., Arentz, G., Winderbaum, L., Lokman, N., Zhang, C., Anderson, L., Scurry, J., Leung, Y., Stewart, C., Carter, J., Kaur, G., Oehler, M., & Hoffmann, P. (2016). Lymph node metastasis of primary endometrial cancers: associated proteins revealed by MALDI imaging. *Proteomics*, 16(11-12), 1793-1801.
- 333.** Mittal, P., Klingler-Hoffmann, M., Arentz, G., Zhang, C., Kaur, G., Oehler, M., & Hoffmann, P. (2016). Proteomics of endometrial cancer diagnosis, treatment, and prognosis. *Proteomics - Clinical Applications*, 10(3), 217-229.
- 334.** Moey, C., Hinze, S., Brueton, L., Morton, J., McMullan, D., Kamien, B., Barnett, C., Brunetti-Pierri, N., Nicholl, J., Gecz, J., & Shoubridge, C. (2016). Xp11.2 microduplications including IQSEC2, TSPYL2 and KDM5C genes in patients with neurodevelopmental disorders. *European Journal of Human Genetics*, 24(3), 373-380.
- 335.** Moey, C., Topper, S., Karn, M., Johnson, A., Das, S., Vidaurre, J., & Shoubridge, C. (2016). Reinitiation of mRNA translation in a patient with X-linked infantile spasms with a protein-truncating variant in ARX. *European Journal of Human Genetics*, 24(5), 681-689.
- 336.** Mol, B. (2016). Fish can't see water. *BJOG: An International Journal of Obstetrics and Gynaecology*, 123(7).
- 337.** Mol, B., Daly, M., & Dodd, J. (2016). Progesterone and preterm birth - Not the hoped for panacea? *The Lancet*, 387(10033), 2066-2068.

- 338.** Mol, B., Logtenberg, S., Verhoeven, C., Bloemenkamp, K., Papatsonis, D., Bakker, J., & van der Post, J. (2016). Does measurement of intrauterine pressure have predictive value during oxytocin-augmented labor? *Journal of Maternal-Fetal and Neonatal Medicine*, 29(20), 3239-3242.
- 339.** Mol, B., Roberts, C., Thangaratnam, S., Magee, L., De Groot, C., & Hofmeyr, G. (2016). Pre-eclampsia. *The Lancet*, 387(10022), 999-1011.
- 340.** Molakatala, S., Shepherd, E., & Grivell, R. M. (2016). Aspirin (single dose) for perineal pain in early postpartum period. *Cochrane Database Of Systematic Reviews*, 2016(3).
- 341.** Molyneaux, E., Pasupathy, D., Kenny, L., McCowan, L., North, R., Dekker, G., Walker, J., Baker, P., Poston, L., & Howard, L. (2016). Socio-economic status influences the relationship between obesity and antenatal depression: data from a prospective cohort study. *Journal of Affective Disorders*, 202(C), 124-127.
- 342.** Monfrance, M., Schuit, E., Groenwold, R., Oudijk, M., De Graaf, I., Bax, C., Bekedam, D., Mol, B., & Langenveld, J. (2016). Pessary placement in the prevention of preterm birth in multiple pregnancies: A propensity score analysis. *European Journal of Obstetrics Gynecology and Reproductive Biology*, 197(C), 72-77.
- 343.** Monfrance, M., Schuit, E., Groenwold, R., Oudijk, M., De Graaf, I., Bax, C., Bekedam, D., Mol, B., & Langenveld, J. (2016). Pessary Placement in the Prevention of Preterm Birth in Multiple Pregnancies: A Propensity Score Analysis. *Obstetrical and Gynecological Survey*, 71(6), 335-336.
- 344.** Moore, E., Zill, A., Anderson, C., Jochem, A., Zimmerman, S., Bonder, C., Kraus, T., Thissen, H., & Voelcker, N. (2016). Synthesis and Conjugation of Alkyne-Functional Hyperbranched Polyglycerols. *Macromolecular Chemistry and Physics*, 217(20), 2252-2261.
- 345.** Moran, L., Spencer, L., Russell, D., Hull, M., Robertson, S., Varcoe, T., Davies, M., Brown, H., & Rodgers, R. (2016). Research priorities for fertility and conception research as identified by multidisciplinary health care practitioners and researchers. *Nutrients*, 8(1), 35-31-35-38.
- 346.** Moran, L., Thomson, R., Buckley, J., Noakes, M., Clifton, P., Norman, R., & Brinkworth, G. (2016). Erratum to: Steroidal contraceptive use is associated with lower bone mineral density in polycystic ovary syndrome. *Endocrine*, 52(2), 404.
- 347.** Moran, L., Tsagareli, V., Noakes, M., & Norman, R. (2016). Altered preconception fatty acid intake is associated with improved pregnancy rates in overweight and obese women undertaking in vitro fertilisation. *Nutrients*, 8(1).
- 348.** Morgan, K., Petersen, T., Donnelley, M., Farrow, N., Parsons, D., & Paganin, D. (2016). Capturing and visualizing transient X-ray wavefront topological features by single-grid phase imaging. *Optics Express*, 24(21), 24435-24450.
- 349.** Morris, J., Roberts, C., Bowen, J., Patterson, J., Bond, D., Algert, C., Thornton, J., & Crowther, C. (2016). Immediate delivery compared with expectant management after preterm pre-labour rupture of the membranes close to term (PPROMT trial): a randomised controlled trial. *Lancet*, 387(10017), 444-452.
- 350.** Muhlack, E., Elliott, J., Carter, D., & Braunack-Mayer, A. (2016). Ethical justifications in alcohol-related health warning discourses. *Cancer Forum*, 40(2).
- 351.** Muhlhauser, B., Yelland, L., McDermott, R., Tapsell, L., McPhee, A., Gibson, R., & Makrides, M. (2016). DHA supplementation during pregnancy does not reduce BMI or body fat mass in children: follow-up of the DHA to Optimize Mother Infant Outcome randomized controlled trial. *American Journal of Clinical Nutrition*, 103(6), 1489-1496.
- 352.** Musolino, C., Warin, M., Wade, T., & Gilchrist, P. (2016). Developing shared understandings of recovery and care: A qualitative study of women with eating disorders who resist therapeutic care. *Journal of Eating Disorders*, 4(1).
- 353.** Mutsaerts, M., Van Oers, A., Groen, H., Burggraaf, J., Kuchenbecker, W., Perquin, D., Koks, C., Van Golde, R., Kaaijk, E., Schierbeek, J., Oosterhuis, G., Broekmans, F., Bemelmans, W., Lambalk, C., Verberg, M., Van Der Veen, F., Klijn, N., Mercelina, P., Van Kasteren, Y., Nap, A., Brinkhuis, E., Vogel, N., Mulder, R., Gondrie, E., De Bruin, J., Sikkema, J., De Greef, M., Ter Bogt, N., Land, J., Mol, B., & Hoek, A. (2016). Randomized trial of a lifestyle program in obese infertile women. *New England Journal of Medicine*, 374(20), 1942-1953.
- 354.** Mutsaerts, M., Van Oers, A., Groen, H., Burggraaf, J., Kuchenbecker, W., Perquin, D., Koks, C., Van Golde, R., Kaaijk, E., Schierbeek, J., Oosterhuis, G., Broekmans, F., Bemelmans, W., Lambalk, C., Verberg, M., Van Der Veen, F., Klijn, N., Mercelina, P., Van Kasteren, Y., Nap, A., Brinkhuis, E., Vogel, N., Mulder, R., Gondrie, E., De Bruin, J., Sikkema, J., De Greef, M., Ter Bogt, N., Land, J., Mol, B., & Hoek, A. (2016). Randomized Trial of a Lifestyle Program in Obese Infertile Women. *Obstetrical and Gynecological Survey*, 71(9), 533-534.
- 355.** Myers, C., McMahon, J., Schneider, A., Petrovski, S., Allen, A., Carvill, G., Zemel, M., Saykally, J., LaCroix, A., Heinzen, E., Hollingsworth, G., Nikanorova, M., Corbett, M., Gezc, J., Coman, D., Freeman, J., Calvert, S., Gill, D., Carney, P., Lerman-Sagie, T., Sampaio, H., Cossette, P., Delanty, N., Dlugos, D., Eichler, E., Epstein, M., Glauser, T., Johnson, M., Kuzniecky, R., Marson, A., O'Brien, T., Ottman, R., Petrou, S., Poduri, A., Pickrell, W., Chung, S., Rees, M., Sherr, E., Sadleir, L., Goldstein, D., Lowenstein, D., Møller, R., Berkovic, S., Scheffer, I., & Mefford, H. (2016). De Novo Mutations in SLC1A2 and CACNA1A Are Important Causes of Epileptic Encephalopathies. *American Journal of Human Genetics*, 99(2), 287-298.
- 356.** Naderpoor, N., Shorakae, S., de Courten, B., Misso, M., Moran, L., & Teede, H. (2016). Metformin and lifestyle modification in polycystic ovary syndrome: Systematic review and meta-analysis. *Human Reproduction Update*, 22(3), 408-409.
- 357.** Naderpoor, N., Shorakae, S., de Courten, B., Misso, M., Moran, L., & Teede, H. (2016). Reply: Metformin for women with hyperandrogenic anovulation. *Human Reproduction Update*, 22(3), 407.
- 358.** Nahuis, M., Weiss, N., Van Der Velde, M., Oosterhuis, J., Hompes, P., Kaaijk, E., Van Der Palen, J., Van Der Veen, F., Mol, B., & Van Wely, M. (2016). Does the postcoital test predict pregnancy in WHO II anovulatory women? A prospective cohort study. *European Journal of Obstetrics Gynecology and Reproductive Biology*, 199(C), 127-131.
- 359.** Nattabi, B., Gudka, S., Ward, J., & Rumbold, A. (2016). Quality improvement interventions for improving the detection and management of curable sexually transmitted infections in primary care. *Cochrane Database Of Systematic Reviews*, 2016(10).
- 360.** Neubauer, H., Pham, D., Zebol, J., Moretti, P., Peterson, A., Leclercq, T., Chan, H., Powell, J., Pitman, M., Samuel, M., Bonder, C., Creek, D., Gliddon, B., & Pitson, S. (2016). An oncogenic role for sphingosine kinase 2. *Oncotarget*, 7(40), 64886-64899.
- 361.** Newitt, C., Davies, M., & Mol, B. (2016). Has the twin rate after in vitro fertilisation really decreased in Australia? *Australian and New Zealand Journal of Obstetrics and Gynaecology*, 56(5), 543-544.
- 362.** Ng, J., Hynes, K., White, G., Sivanathan, K., Vandyke, K., Bartold, P., & Gronthos, S. (2016). Immunomodulatory properties of induced pluripotent stem cell-derived mesenchymal cells. *Journal of Cellular Biochemistry*, 117(12), 2844-2853.
- 363.** Nijkamp, J., Korteweg, F., Groen, H., Timmer, A., Van Den Berg, G., Bossuyt, P., Mol, B., & Erwich, J. (2016). Thyroid function testing in women who had a stillbirth. *Clinical Endocrinology*, 85(2), 291-298.
- 364.** Nijman, T., van Vliet, E., Benders, M., Mol, B., Franx, A., Nikkels, P., & Oudijk, M. (2016). Placental histology in spontaneous and indicated preterm birth: A case control study. *Placenta*, 48(C), 56-62.
- 365.** Nijman, T., van Vliet, E., Koullali, B., Mol, B., & Oudijk, M. (2016). Antepartum and intrapartum interventions to prevent preterm birth and its sequelae. *Seminars in Fetal and Neonatal Medicine*, 21(2), 121-128.
- 366.** Nijman, T., van Vliet, E., Naaktgeboren, C., Oude Rengerink, K., de Lange, T., Bax, C., Bloemenkamp, K., van Eyck, J., Kok, M., Scheepers, H., Woiski, M., Franx, A., Mol, B., & Oudijk, M. (2016). Nifedipine versus placebo in the treatment of preterm prelabor rupture of membranes: a randomized controlled trial: Assessment of perinatal outcome by use of tocolysis in early labor—APOSTEL IV trial. *European Journal of Obstetrics Gynecology and Reproductive Biology*, 205, 79-84.
- 367.** Nisar, M. I., Jehan, F., Shafiq, Y., Lassi, Z. S., & Zaidi, A. K. M. (2016). Conjugate vaccines for preventing Haemophilus influenzae type b infections in children under 5 years of age. *Cochrane Database Of Systematic Reviews*,

2016(10).

368. Nisenblat, V., Bossuyt, P., Farquhar, C., Johnson, N., & Hull, M. (2016). Imaging modalities for the non-invasive diagnosis of endometriosis. *Cochrane Database Of Systematic Reviews*, 2016(2).

369. Nisenblat, V., Bossuyt, P., Shaikh, R., Farquhar, C., Jordan, V., Scheffers, C., Mol, B., Johnson, N., & Hull, M. (2016). Blood biomarkers for the non-invasive diagnosis of endometriosis. *Cochrane Database Of Systematic Reviews*, 2016(5).

370. Nisenblat, V., Prentice, L., Bossuyt, P., Farquhar, C., Hull, M., & Johnson, N. (2016). Combination of the non-invasive tests for the diagnosis of endometriosis. *Cochrane Database Of Systematic Reviews*, 2016(7).

371. Nisenblat, V., Prentice, L., Bossuyt, P. M., Farquhar, C., Hull, M. L., & Johnson, N. (2016). Combination of the non-invasive tests for the diagnosis of endometriosis. *Cochrane Database Of Systematic Reviews* (7).

372. Norman, M., South, C., Quinn, P., Chan, D., Palmer, S., Netting, M., & Gold, M. (2016). Does providing written dietary advice improve the ingestion of non-allergic nuts in children with existing nut allergies? - A randomized controlled trial. *Clinical and Experimental Allergy*, 46(5), 741-748.

373. O'Brien, C., Cramp, C., & Dodd, J. (2016). Delivery of Dietary and Lifestyle Interventions in Pregnancy: Is it Time to Promote the Use of Electronic and Mobile Health Technologies? *Seminars in Reproductive Medicine*, 34(2), e22-e27.

374. O'Brien, C., Grivell, R., & Dodd, J. (2016). Systematic review of antenatal dietary and lifestyle interventions in women with a normal body mass index. *Acta Obstetrica et Gynecologica Scandinavica*, 95(3), 259-269.

375. O'Bryan, M., & Lane, M. (2016). Changes in sperm methylation profile: A potential cause of infertility and a handle to monitor improvements in genetic and lifestyle interactions. *Fertility and Sterility*, 105(1), 45-46.

376. Oehler, M. K. (2016). Cervical Pap smear screening is coming to an end. *Maturitas*, 94(C), 11-12.

377. Opie, G., Evans, A., Ridding, M., & Semmler, J. (2016). Short-term immobilization influences use-dependent cortical plasticity and fine motor performance. *Neuroscience*, 330(C), 247-256.

378. Opie, G., Vosnakis, E., Ridding, M., Ziemann, U., & Semmler, J. (2016). Priming theta burst stimulation enhances motor cortex plasticity in young but not old adults. *Brain Stimulation*.

379. Palmer, D., Sullivan, T., Gold, M., Prescott, S., & Makrides, M. (2016). Randomized controlled trial of early regular egg intake to prevent egg allergy. *Journal of Allergy and Clinical Immunology*, 139(5).

380. Palmer, E., Leffler, M., Rogers, C., Shaw, M., Carroll, R., Earl, J., Cheung, N., Champion, B., Hu, H., Haas, S., Kalscheuer, V., Gecz, J., & Field, M. (2016). New insights into Brunner

syndrome and potential for targeted therapy. *Clinical Genetics*, 89(1), 120-127.

381. Palmer, E., Stuhlmann, T., Weinert, S., Haan, E., van Esch, H., Holvoet, M., Boyle, J., Leffler, M., Raynaud, M., Moraine, C., van Bokhoven, H., Kleefstra, T., Kahrizi, K., Najmabadi, H., Ropers, H., Delgado, M., Sirsi, D., Golla, S., Sommer, A., Pietryga, M., Chung, W., Wynn, J., Rohena, L., Bernardo, E., Hamlin, D., Faux, B., Grange, D., Manwaring, L., Tolmie, J., Joss, S., Cobben, J., Duijkers, F., Goehringer, J., Challman, T., Hennig, F., Fischer, U., Grimme, A., Suckow, V., Musante, L., Nicholl, J., Shaw, M., Lodh, S., Niu, Z., Rosenfeld, J., Stankiewicz, P., Jentsch, T., Gecz, J., Field, M., & Kalscheuer, V. (2016). De novo and inherited mutations in the X-linked gene CLCN4 are associated with syndromic intellectual disability and behavior and seizure disorders in males and females. *Molecular Psychiatry*, Online, 1-9.

382. Parmar, P., Taal, H., Timpson, N., Thiering, E., Lehtimäki, T., Marinelli, M., Lind, P., Howe, L., Verwoert, G., Aalto, V., Uitterlinden, A., Briollais, L., Evans, D., Wright, M., Newnham, J., Whitfield, J., Lyytikäinen, L., Rivadeneira, F., Boomsma, D., Viikari, J., Gillman, M., St Pourcain, B., Hottenga, J., Montgomery, G., Hofman, A., Kähönen, M., Martin, N., Tobin, M., Raitakari, O., Vioque, J., Jaddoe, V., Jarvelin, M., Beilín, L., Heinrich, J., Van Duijn, C., Pennell, C., Lawlor, D., & Palmer, L. (2016). International genome-wide association study consortium identifies novel loci associated with blood pressure in children and adolescents. *Circulation: Cardiovascular Genetics*, 9(3), 266-278.

383. Parrella, A., Braunack-Mayer, A., Collins, J., Clarke, M., Toher, R., Ratcliffe, J., & Marshall, H. (2016). Prioritizing government funding of adolescent vaccinations: recommendations from young people on a citizens' jury. *Vaccine*, 34(31), 3592-3597.

384. Pastore, M., Studier, H., Bonder, C., & Roberts, M. (2016). Non-invasive metabolic imaging of melanoma progression. *Experimental Dermatology*, 1-8.

385. Pattaro, C., Teumer, A., Gorski, M., Chu, A., Li, M., Mijatovic, V., Garnaas, M., Tin, A., Sorice, R., Li, Y., Taliun, D., Olden, M., Foster, M., Yang, Q., Chen, M., Pers, T., Johnson, A., Ko, Y., Fuchsberger, C., Tayo, B., Nalls, M., Feitosa, M., Isaacs, A., Dehghan, A., D'Adamo, P., Adeyemo, A., Dieffenbach, A., Zonderman, A., Nolte, I., Van Der Most, P., Wright, A., Shuldiner, A., Morrison, A., Hofman, A., Smith, A., Dreisbach, A., Franke, A., Uitterlinden, A., Metspalu, A., Tonjes, A., Lupo, A., Robino, A., Johansson, Å., Demirkan, A., Kollerits, B., Freedman, B., Ponte, B., Oostra, B., Paulweber, B., Krämer, B., Mitchell, B., Buckley, B., Peralta, C., Hayward, C., Helmer, C., Rotimi, C., Shaffer, C., Müller, C., Sala, C., Van Duijn, C., Saint-Pierre, A., Ackermann, D., Shriner, D., Ruggiero, D., Toniolo, D., Lu, Y., Cusi, D., Czamara, D., Ellinghaus, D., Siscovick, D., Ruderfer, D., Gieger, C., Grallert, H., Rohtchina, E., Atkinson, E., Holliday, E., Boerwinkle, E., Salvi, E., Bottinger, E., Murgia, F., Rivadeneira, F., & Ernst, F. (2016). Genetic associations at 53 loci highlight cell types and biological pathways relevant for kidney function.

Nature Communications, 7(ARTN 10023), 1-19.

386. Pearce, A., Sawyer, A., Chittleborough, C., Mittinty, M., Law, C., & Lynch, J. (2016). Do early life cognitive ability and self-regulation skills explain socio-economic inequalities in academic achievement? An effect decomposition analysis in UK and Australian cohorts. *Social Science and Medicine*, 165, 108-118.

387. Pearce, A., Scalzi, D., Lynch, J., & Smithers, L. (2016). Do thin, overweight and obese children have poorer development than their healthy-weight peers at the start of school? Findings from a South Australian data linkage study. *Early Childhood Research Quarterly*, 35(C), 85-94.

388. Pederick, D., Homan, C., Jaehne, E., Piltz, S., Haines, B., Baune, B., Jolly, L., Hughes, J., Gecz, J., & Thomas, P. (2016). Pcdh19 loss-of-function increases neuronal migration in vitro but is dispensable for brain development in mice. *Scientific Reports*, 6.

389. Peelen, M., Kazemier, B., Ravelli, A., De Groot, C., Van Der Post, J., Mol, B., Hajenius, P., & Kok, M. (2016). Impact of fetal gender on the risk of preterm birth, a national cohort study. *Acta Obstetrica et Gynecologica Scandinavica*, 95(9), 1034-1041.

390. Peelen, M., Sheikh, A., Kok, M., Hajenius, P., Zimmermann, L., Kramer, B., Hukkelhoven, C., Reiss, I., Mol, B., & Been, J. (2016). Tobacco control policies and perinatal health: A national quasi-experimental study. *Scientific Reports*, 6, 1-10.

391. Peiris, H., Duffield, M., Fadista, J., Jessup, C., Kashmir, V., Genders, A., McGee, S., Martin, A., Saiedi, M., Morton, N., Carter, R., Cousin, M., Kokotos, A., Oskolkov, N., Volkov, P., Hough, T., Fisher, E., Tybulewicz, V., Busciglio, J., Coskun, P., Becker, A., Belichenko, P., Mobley, W., Ryan, M., Chan, J., Laybutt, D., Coates, P., Yang, S., Ling, C., Groop, L., Pritchard, M., & Keating, D. (2016). A syntenic cross species aneuploidy genetic screen links RCAN1 expression to β -Cell mitochondrial dysfunction in type 2 diabetes. *PLoS Genetics*, 12(5).

392. Peña, A., Graham, A., Rao, V., Henning, P., & Couper, J. (2016). Diabetes recurrence after haemolytic uraemic syndrome outbreak in Adelaide. *Journal of Paediatrics and Child Health*, 52(7), 771-773.

393. Peña, A., Maftei, O., Harrington, J., Anderson, J., Hirte, C., Gent, R., & Couper, J. (2016). Lack of evidence for progression of atherosclerosis during puberty in type 1 diabetes. *Pediatric Diabetes*, 17(3), 199-205.

394. Penninx, J., Herman, M., Kruitwagen, R., Ter Haar, A., Mol, B., & Bongers, M. (2016). Bipolar versus balloon endometrial ablation in the office: A randomized controlled trial. *European Journal of Obstetrics Gynecology and Reproductive Biology*, 196(C), 52-56.

395. Penno, M., Thomson, R., & Couper, J. (2016). Bunbury to Bundaberg, Darwin to Dover: establishing a successful Regional Participation Program for the ENDIA type 1 diabetes cohort study. *The Medical journal of Australia*, 205(10), 486.

396. Perdok, H., Jans, S., Verhoeven, C.,

- Henneman, L., Wieggers, T., Mol, B., Schellevis, F., & de Jonge, A. (2016). Opinions of maternity care professionals and other stakeholders about integration of maternity care: A qualitative study in the Netherlands. *BMC Pregnancy and Childbirth*, 16(1), 1-12.
- 397.** Perdok, H., Jans, S., Verhoeven, C., van Dillen, J., Batenburg, R., Mol, B., Schellevis, F., & de Jonge, A. (2016). Opinions of professionals about integrating midwife- and obstetrician-led care in The Netherlands. *Midwifery*, 37(C), 9-18.
- 398.** Pham, C., Gibb, C., Mittinty, M., FitrIDGE, R., Marshall, V., & Karnon, J. (2016). A comparison of propensity score-based approaches to health service evaluation: a case study of a preoperative physician-led clinic for high-risk surgical patients. *Journal of Evaluation in Clinical Practice*, 22(5), 761-770.
- 399.** Pham, D., Tan, C., Homan, C., Jolly, L., & Gecz, J. (2016). Protocadherin Mutations in Neurodevelopmental Disorders. In C. Sala & C. Verpelli (Eds.), *Neuronal and Synaptic Dysfunction in Autism Spectrum Disorder and Intellectual Disability (Vol. 1, pp. 221-231)*. London: Elsevier.
- 400.** Pharoah, P. D. P., Song, H., Dicks, E., Intermaggio, M. P., Harrington, P., Baynes, C., Alsop, K., Bogdanova, N., Cicek, M. S., Cunningham, J. M., Fridley, B. L., Gentry-Maharaj, A., Hillemanns, P., Lele, S., Lester, J., McGuire, V., Moysich, K. B., Poblete, S., Sieh, W., Sucheston-Campbell, L., Widschwendter, M., Whittmore, A. S., Dörk, T., Menon, U., Odunsi, K., Goode, E. L., Karlan, B. Y., Bowtell, D. D., Gayther, S. A., & Ramus, S. J. (2016). PPM1D Mosaic Truncating Variants in Ovarian Cancer Cases May Be Treatment-Related Somatic Mutations. *Journal of the National Cancer Institute*, 108(3), djv347-djv347.
- 401.** Phillips, B., Carr, J., Curtis, N., Smeesters, P., Steer, A., Keir, A., Froessler, B., & Stanworth, S. (2016). Towards evidence based medicine for paediatricians. *Archives Of Disease In Childhood*, 101(2).
- 402.** Phillips, J., Couper, J., Penno, M., & Harrison, L. (2016). Type 1 diabetes: A disease of developmental origins. *Pediatric Diabetes*.
- 403.** Pinget, G., Corpuz, T., Stolp, J., Lousberg, E., Diener, K., Robertson, S., Sprent, J., & Webster, K. (2016). The majority of murine T cells at the maternal-fetal interface in pregnancy produce IL-17. *Immunology and Cell Biology*, 94(7), 623-630.
- 404.** Pitcher, J. (2016). Brain Stimulation in Children Born Preterm-Promises and Pitfalls. In A. Kirton & D. Gilbert (Eds.), *Pediatric Brain Stimulation: Mapping and Modulating The Developing Brain (Vol. 1, pp. 237-255)*. London: Elsevier.
- 405.** Plueckhahn, T., Schneider, L., & Delfabbro, P. (2016). Assessing lateralization in domestic dogs: Performance by Canis familiaris on the Kong test. *Journal of Veterinary Behavior: Clinical Applications and Research*, 15(C), 25-30.
- 406.** Poddar, B., Das, J. K., & Salam, R. A. (2016). Editorial. *Indian Pediatrics*, 53(6), 475-478.
- 407.** Pössel, P., Rakes, C., Rudasill, K. M., Sawyer, M. G., Spence, S. H., & Sheffield, J. (2016). Associations Between Teacher-Reported School Climate and Depressive Symptoms in Australian Adolescents: A 5-Year Longitudinal Study. *School Mental Health*, 8(4), 425-440.
- 408.** Qu, Z., Cui, J., Harata-Lee, Y., Thazin Nwe Aung, T., Feng, Q., Raison, J., Kortschak, R., & Adelson, D. (2016). Identification of candidate anti-cancer molecular mechanisms of compound kushen injection using functional genomics. *Oncotarget*, 7(40), 66003-66019.
- 409.** Radhakutty, A., Mangelsdorf, B., Drake, S., Samocha-Bonet, D., Heilbronn, L., Smith, M., Thompson, C., & Burt, M. (2016). Effects of prednisolone on energy and fat metabolism in patients with rheumatoid arthritis: tissue-specific insulin resistance with commonly used prednisolone doses. *Clinical Endocrinology*, 85(5), 741-747.
- 410.** Radhakutty, A., Mangelsdorf, B., Drake, S., Samocha-Bonet, D., Jenkins, A., Heilbronn, L., Smith, M., Thompson, C., & Burt, M. (2016). Effect of acute and chronic glucocorticoid therapy on insulin sensitivity and postprandial vascular function. *Clinical Endocrinology*, 84(4), 501-508.
- 411.** Ratcliffe, J., Huynh, E., Chen, G., Stevens, K., Swait, J., Brazier, J., Sawyer, M., Roberts, R., & Flynn, T. (2016). Valuing the Child Health Utility 9D: using profile case best worst scaling methods to develop a new adolescent specific scoring algorithm. *Social Science and Medicine*, 157(C), 48-59.
- 412.** Ratcliffe, J., Huynh, E., Stevens, K., Brazier, J., Sawyer, M., & Flynn, T. (2016). Nothing about us without us? a comparison of adolescent and adult health-state values for the Child Health Utility-9D using profile case best-worst scaling. *Health Economics*, 25(4), 486-496.
- 413.** Reece, C., Ebstein, R., Cheng, X., Ng, T., & Schirmer, A. (2016). Data set demonstrating an absence of touch effects on social orienting in adults. *Data in Brief*, 8(C), 904-909.
- 414.** Reece, C., Ebstein, R., Cheng, X., Ng, T., & Schirmer, A. (2016). Erratum: Corrigendum to 'Maternal touch predicts social orienting in young children'. *Cognitive Development*, 40(C), 178.
- 415.** Reece, C., Ebstein, R., Cheng, X., Ng, T., & Schirmer, A. (2016). Maternal touch predicts social orienting in young children. *Cognitive Development*, 39(C), 128-140.
- 416.** Reijnders, M., Zachariadis, V., Latour, B., Jolly, L., Mancini, G., Pfundt, R., Wu, K., Van Ravenswaaij-Arts, C., Veenstra-Knol, H., Anderlid, B., Wood, S., Cheung, S., Barnicoat, A., Probst, F., Magoulas, P., Brooks, A., Malmgren, H., Harila-Saari, A., Marcelis, C., Vreeburg, M., Hobson, E., Sutton, V., Stark, Z., Vogt, J., Cooper, N., Lim, J., Price, S., Lai, A., Domingo, D., Reversade, B., the, D. D. D. S., Gecz, J., Gilissen, C., Brunner, H., Kini, U., Roepman, R., Nordgren, A., & Kleefstra, T. (2016). De novo loss-of-function mutations in USP9X cause a female-specific recognizable syndrome with developmental delay and congenital malformations. *American Journal of Human Genetics*, 98(2), 373-381.
- 417.** Ricciardelli, C. (2016). Women In Cancer Profile: My pathway to understanding the role of the tumour microenvironment in cancer progression. *Endocrine-Related Cancer*, 23(11), P27-P31.
- 418.** Ricciardelli, C., Lokman, N., Ween, M., & Oehler, M. (2016). Ovarian cancer-peritoneal cell interactions promote extracellular matrix processing. *Endocrine-Related Cancer*, 23(11), T155-T168.
- 419.** Richards, R., Robertson, S., O'Keefe, L., Fornarino, D., Scott, A., Lardelli, M., & Baune, B. (2016). The enemy within: innate surveillance-mediated cell death, the common mechanism of neurodegenerative disease. *Frontiers in Neuroscience*, 10.
- 420.** Ricos, M., Hodgson, B., Pippucci, T., Saidin, A., Ong, Y., Heron, S., Licchetta, L., Bisulli, F., Bayly, M., Hughes, J., Baldassari, S., Palombo, F., Epilepsy Electroclinical Study, G., Santucci, M., Meletti, S., Berkovic, S., Rubboli, G., Thomas, P., Scheffer, I., Tinuper, P., Geoghegan, J., Schreiber, A., & Dibbens, L. (2016). Mutations in the mammalian target of rapamycin pathway regulators NPRL2 and NPRL3 cause focal epilepsy. *Annals of Neurology*, 79(1), 120-131.
- 421.** Ried, J., Jeff, J., Chu, A., Bragg-Gresham, J., Van Dongen, J., Huffman, J., Ahluwalia, T., Cadby, G., Eklund, N., Eriksson, J., Esko, T., Feitosa, M., Goel, A., Gorski, M., Hayward, C., Heard-Costa, N., Jackson, A., Jokinen, E., Kanoni, S., Kristiansson, K., Kutalik, Z., Lahti, J., Luan, J., Mägi, R., Mahajan, A., Mangino, M., Medina-Gomez, C., Monda, K., Nolte, I., Pérusse, L., Prokopenko, I., Qi, L., Rose, L., Salvi, E., Smith, M., Snieder, H., Standáková, A., Ju Sung, Y., Tachmazidou, I., Teumer, A., Thorleifsson, G., Van Der Harst, P., Walker, R., Wang, S., Wild, S., Willems, S., Wong, A., Zhang, W., Albrecht, E., Couto Alves, A., Bakker, S., Barlassina, C., Bartz, T., Beilby, J., Bellis, C., Bergman, R., Bergmann, S., Blangero, J., Blüher, M., Boerwinkle, E., Bonycastle, L., Bornstein, S., Bruinenberg, M., & Campbell, H. (2016). A principal component meta-analysis on multiple anthropometric traits identifies novel loci for body shape. *Nature Communications*, 7(ARTN 13357), 1-11.
- 422.** Rigbye, K., van Hasselt, P., Burgess, R., Damiano, J., Mullen, S., Petrovski, S., Puranam, R., van Gassen, K., Gecz, J., Scheffer, I., McNamara, J., Berkovic, S., & Hildebrand, M. (2016). Is FGF13 a major contributor to genetic epilepsy with febrile seizures plus? *Epilepsy Research*, 128(C), 48-51.
- 423.** Robertson, S., Jin, M., Yu, D., Moldenhauer, L., Davies, M., Hull, M., & Norman, R. (2016). Corticosteroid therapy in assisted reproduction - Immune suppression is a faulty premise. *Human Reproduction*, 31(10), 2164-2173.
- 424.** Robertson, S., & Sharkey, D. (2016). Seminal fluid and fertility in women. *Fertility and Sterility*, 106(3), 511-519.
- 425.** Robillard, P. Y., Dekker, G., Iacobelli, S., & Chauat, G. (2016). An essay of reflection: Why does preeclampsia exist in humans, and why are there such huge geographical differences in epidemiology? *Journal Of Reproductive Immunology*, 114(C), 44-47.

- 426.** Robker, R., & Russell, D. (2016). A Primate-Specific Mediator of Ovulation? *Endocrinology*, 157(11), 4209-4211.
- 427.** Rogozinska, E., D'Amico, M., Khan, K., Cecatti, J., Teede, H., Yeo, S., Vinter, C., Rayanagoudar, G., Barakat, R., Perales, M., Dodd, J., Devlieger, R., Bogaerts, A., Van Poppel, M., Haakstad, L., Shen, G., Shub, A., Luoto, R., Kinnunen, T., Phelan, S., Poston, L., Scudeller, T., El Beltagy, N., Stafne, S., Tonstad, S., Geiker, N., Ruifrok, A., Mol, B., Coomarasamy, A., & Thangaratinam, S. (2016). Development of composite outcomes for individual patient data (IPD) meta-analysis on the effects of diet and lifestyle in pregnancy: a Delphi survey. *BJOG: An International Journal of Obstetrics and Gynaecology*, 123(2), 190-198.
- 428.** Roos, C., Vis, J., Scheepers, H., Bloemenkamp, K., Duvekot, H., Van Eyck, J., De Groot, C., Kok, J., Opmeer, B., Oudijk, M., Papatsonis, D., Porath, M., Sollie, K., Spaanderman, M., Lotgering, F., Van Der Post, J., & Mol, B. (2016). Fetal fibronectin status and cervical length in women with threatened preterm labor and the effectiveness of maintenance tocolysis. *The Journal of Maternal-Fetal and Neonatal Medicine*, 29(10), 1556-1561.
- 429.** Rosman, A., Vlemmix, F., Ensing, S., Opmeer, B., te Hoven, S., Velzel, J., de Hundt, M., van den Berg, S., Rota, H., van der Post, J., Mol, B., & Kok, M. (2016). Mode of childbirth and neonatal outcome after external cephalic version: A prospective cohort study. *Midwifery*, 39(C), 44-48.
- 430.** Ross, M. D., Dunning, K. R., Ritter, L. A., Thompson, J. G., & Brown, H. M. (2016). Insulin impacts cumulus oocyte complex maturation and early embryo development in vitro. *Clinical Endocrinology*, 84, 48-48.
- 431.** Ruiter, L., Eschbach, S., Burgers, M., Rengerink, K., Pampus, M., Goes, B., Mol, B., Graaf, I., & Pajkr, E. (2016). Predictors for Emergency Cesarean Delivery in Women with Placenta Previa. *American Journal of Perinatology*, 33(14), 1407-1414.
- 432.** Ruiter, L., Kok, N., Limpens, J., Derks, J., de Graaf, I., Mol, B., & Pajkr, E. (2016). Incidence of and risk indicators for vasa praevia: A systematic review. *BJOG: An International Journal of Obstetrics and Gynaecology*, 123(8), 1278-1287.
- 433.** Russell, C., Taki, S., Laws, R., Azadi, L., Campbell, K., Elliott, R., Lynch, J., Ball, K., Taylor, R., & Denney-Wilson, E. (2016). Effects of parent and child behaviours on overweight and obesity in infants and young children from disadvantaged backgrounds: Systematic review with narrative synthesis Energy balance-related behaviors. *BMC Public Health*, 16(1), 1-13.
- 434.** Russell, D., Gilchrist, R., Brown, H., & Thompson, J. (2016). Bidirectional communication between cumulus cells and the oocyte: old hands and new players? *Theriogenology*, 86(1), 62-68.
- 570.** Sadleir, L. G., Gecz, J. & Scheffer, I. S. (2016). *Epilepsy that occurs predominantly in girls*. Neurobiology of Disease. Oxford University Press. p.307-311.
- 435.** Safarchi, A., Octavia, S., Luu, L., Tay, C., Sintchenko, V., Wood, N., Marshall, H., McIntyre, P., & Lan, R. (2016). Better colonisation of newly emerged *Bordetella pertussis* in the co-infection mouse model study. *Vaccine*, 34, 3967-3971.
- 436.** Safarchi, A., Octavia, S., Wu, S., Kaur, S., Sintchenko, V., Gilbert, G., Wood, N., McIntyre, P., Marshall, H., Keil, A., & Lan, R. (2016). Genomic dissection of Australian *Bordetella pertussis* isolates from the 2008-2012 epidemic. *Journal of Infection*, 72(4), 468-477.
- 437.** Salam, R., Arshad, A., Das, J., Khan, M., Mahmood, W., Freedman, S., & Bhutta, Z. (2016). Interventions to Prevent Unintentional Injuries Among Adolescents: A Systematic Review and Meta-Analysis. *Journal of Adolescent Health*, 59(2), S76-S87.
- 438.** Salam, R., Das, J., Lassi, Z., & Bhutta, Z. (2016). Adolescent Health and Well-Being: Background and Methodology for Review of Potential Interventions. *Journal of Adolescent Health*, 59(2), S4-S10.
- 439.** Salam, R., Das, J., Lassi, Z., & Bhutta, Z. (2016). Adolescent Health Interventions: Conclusions, Evidence Gaps, and Research Priorities. *Journal of Adolescent Health*, 59(2), S88-S92.
- 440.** Salam, R., Faqqah, A., Sajjad, N., Lassi, Z., Das, J., Kaufman, M., & Bhutta, Z. (2016). Improving Adolescent Sexual and Reproductive Health: A Systematic Review of Potential Interventions. *Journal of Adolescent Health*, 59(2), S11-S28.
- 441.** Salam, R., Hooda, M., Das, J., Arshad, A., Lassi, Z., Middleton, P., & Bhutta, Z. (2016). Interventions to Improve Adolescent Nutrition: A Systematic Review and Meta-Analysis. *Journal of Adolescent Health*, 59(2), S29-S39.
- 442.** Salam, R., Qureshi, R., Sheikh, S., Khawaja, A., Sawchuck, D., Vidler, M., Von Dadelszen, P., Zaidi, S., Bhutta, Z., Sultana, Z., Anwer, D., Beth, P., Olabisi, A., Marianne, C., Dada, O., Sharla, D., Tabassum, F., Shivaprasad, G., Chirag, K., Geetanjali, K., Tang, L., Jing, L., Sun, L., Tatenda, M., Umesh, R., Sumedha, S., Kunle, S., & Magee, L. (2016). Potential for task-sharing to Lady Health Workers for identification and emergency management of pre-eclampsia at community level in Pakistan. *Reproductive Health*, 13, 107.
- 443.** Savic, M., Chur-Hansen, A., Mahmood, A., & Moore, V. (2016). 'We don't have to go and see a special person to solve this problem': trauma, mental health beliefs and processes for addressing 'mental health issues' among Sudanese refugees in Australia. *International Journal of Social Psychiatry*, 62(1), 76-83.
- 444.** Sawyer, M., Reece, C., Bowering, K., Jeffs, D., Sawyer, A., Peters, J., Mpundu-Kaambwa, C., Clark, J., McDonald, D., Mittinty, M., & Lynch, J. (2016). Usage, adherence and attrition: how new mothers engage with a nurse-moderated web-based intervention to support maternal and infant health. A 9-month observational study. *BMJ Open*, 6(8).
- 445.** Schjenken, J., Zhang, B., Chan, H., Sharkey, D., Fullston, T., & Robertson, S. (2016). miRNA Regulation of Immune Tolerance in Early Pregnancy. *American Journal of Reproductive Immunology*, 75(3), 272-280.
- 446.** Schneider, L., Goldsworthy, M., Cole, J., Ridding, M., & Pitcher, J. (2016). The influence of short-interval intracortical facilitation when assessing developmental changes in short-interval intracortical inhibition. *Neuroscience*, 312(C), 19-25.
- 447.** Schober, G., Lange, K., Steinert, R., Hutchison, A., Luscombe-Marsh, N., Landrock, M., Horowitz, M., Seimon, R., & Feinle-Bisset, C. (2016). Contributions of upper gut hormones and motility to the energy intake-suppressant effects of intraduodenal nutrients in healthy, lean men – a pooled-data analysis. *Physiological Reports*, 4(17).
- 448.** Scholten, I., Braakhekke, M., Limpens, J., Hompes, P., van der Veen, F., Mol, B., & Gianotten, J. (2016). Reporting multiple cycles in trials on medically assisted reproduction. *Reproductive BioMedicine Online*, 33(5), 646-651.
- 449.** Schuch, H., Peres, K., Singh, A., Peres, M., & Do, L. (2017). Socioeconomic position during life and periodontitis in adulthood: a systematic review. *Community Dentistry and Oral Epidemiology*, 45(3), 201-208.
- 450.** Schuit, E., Hukkelhoven, C., van der Goes, B., Overbeeke, I., Moons, K., Mol, B., Groenwold, R., & Kwee, A. (2016). Risk indicators for referral during labor from community midwife to gynecologist: a prospective cohort study. *Journal of Maternal-Fetal and Neonatal Medicine*, 29(20), 3304-3311.
- 451.** Scoleri, G., Choo, J., Leong, L., Goddard, T., Shephard, L., Burr, L., Bastian, I., Thomson, R., & Rogers, G. (2016). Culture-independent detection of nontuberculous mycobacteria in clinical respiratory samples. *Journal of Clinical Microbiology*, 54(9), 2395-2398.
- 452.** Seggers, J., Pontesilli, M., Ravelli, A., Painter, R., Hadders-Algra, M., Heineman, M., Repping, S., Mol, B., Roseboom, T., & Ensing, S. (2016). Effects of in vitro fertilization and maternal characteristics on perinatal outcomes: A population-based study using siblings. *Fertility and Sterility*, 105(3).
- 453.** Shafiq, Y., Saleem, A., Lassi, Z. S., & Zaidi, A. K. (2016). Community-based versus health facility-based management of acute malnutrition for reducing the prevalence of severe acute malnutrition in children 6 to 59 months of age in low- and middle-income countries. *Cochrane Database Of Systematic Reviews*, 2016(11).
- 454.** Sharkey, D., Tremellen, K., Briggs, N., Dekker, G., & Robertson, S. (2016). Seminal plasma transforming growth factor- β , activin A and follistatin fluctuate within men over time. *Human Reproduction*, 31(10), 2183-2191.
- 455.** Shen, S., Lu, J., Zhang, L., He, J., Li, W., Chen, N., Wen, X., Xiao, W., Yuan, M., Qiu, L., Cheng, K. K., Xia, H., Mol, B. W. J., & Qiu, X. (2016). Single fasting plasma glucose measurement compared with 75 g oral glucose-tolerance test in prediction of adverse perinatal outcomes: a prospective cohort study from China. *Lancet*.
- 456.** Shepherd, A., Shepherd, E., & Brook, N.

- (2016). Intravesical Bacillus Calmette-Guérin with interferon-alpha versus intravesical Bacillus Calmette-Guérin for treating non-muscle-invasive bladder cancer. *Cochrane Database Of Systematic Reviews*, 2016(3).
- 457.** Shepherd, E., Middleton, P., Makrides, M., McIntyre, S., Badawi, N., & Crowther, C. (2016). Neonatal interventions for preventing cerebral palsy: An overview of Cochrane systematic reviews. *Cochrane Database Of Systematic Reviews*, 2016(10).
- 458.** Shepherd, E., Middleton, P., Makrides, M., McIntyre, S. J., Badawi, N., & Crowther, C. A. (2016). Antenatal and intrapartum interventions for preventing cerebral palsy: An overview of Cochrane systematic reviews. *Cochrane Database Of Systematic Reviews*, 2016(2).
- 459.** Shrine, N., Tobin, M., Schurmann, C., Artigas, M., Hui, J., Lehtimäki, T., Raitakari, O., Pennell, C., Ang, Q., Strachan, D., Homuth, G., Gläser, S., Felix, S., Evans, D., Henderson, J., Granell, R., Palmer, L., Huffman, J., Hayward, C., Scotland, G., Malarstig, A., Musk, B., James, A., & Wain, L. (2016). Genome-wide association study of copy number variation with lung function identifies a novel signal of association near BANP for forced vital capacity. *BMC Genetics*, 17(1).
- 571.** Shoubridge, C., Field, M., Leventer, R. J., & Géczy, J. (2016). *Developmental abnormalities due to mutations in the Aristalless-related homeobox gene*. Epstein's Inborn Errors of Development: the molecular basis of clinical disorders of morphogenesis (IED), Oxford University Press, New York. 3rd edition, p.761-767.
- 460.** Silver, B., Kaldor, J., Rumbold, A., Ward, J., Smith, K., Dyda, A., Ryder, N., Yip, T., Su, J., & Guy, R. (2016). Community and clinic-based screening for curable sexually transmissible infections in a high prevalence setting in Australia: A retrospective longitudinal analysis of clinical service data from 2006 to 2009. *Sexual Health*, 13(2), 140-147.
- 461.** Singh, A., Harford, J., Schuch, H. S., Watt, R. G., & De Anselmo Peres, M. (2016). Theoretical basis and explanation for the relationship between area-level social inequalities and population oral health outcomes - A scoping review. *SSM - Population Health*, 2(C), 451-462.
- 462.** Sisnowski, J., Street, J., & Braunack-Mayer, A. (2016). Targeting population nutrition through municipal health and food policy: implications of New York City's experiences in regulatory obesity prevention. *Food Policy*, 58(C), 24-34.
- 463.** Skinner, V., Braunack-Mayer, A., & Winning, T. (2016). Interactional research in PBL: Another piece of the 'silence in PBL' puzzle: Students' explanations of dominance and quietness as complementary group roles. *Interdisciplinary Journal of Problem-based Learning*, 10(2).
- 464.** Small, A., Al-Baghdadi, M., Quach, A., Hii, C., & Ferrante, A. (2016). Complement receptor immunoglobulin: a control point in infection and immunity, inflammation and cancer. *Swiss Medical Weekly*, 146:w14301.
- 465.** Smit, J., Kasius, J., Eijkemans, M., Koks, C., van Golde, R., Nap, A., Scheffer, G., Manger, P., Hoek, A., Schoot, B., van Heusden, A., Kuchenbecker, W., Perquin, D., Fleischer, K., Kaaijk, E., Sluijmer, A., Friederich, J., Dykgraaf, R., van Hooff, M., Louwe, L., Kwee, J., de Koning, C., Janssen, I., Mol, F., Mol, B., Broekmans, F., & Torrance, H. (2016). Hysteroscopy before in-vitro fertilisation (inSIGHT): a multicentre, randomised controlled trial. *Lancet*, 387(10038), 2622-2629.
- 466.** Smithers, L., Mol, B., Jamieson, L., & Lynch, J. (2016). Cesarean birth is not associated with early childhood body mass index. *Pediatric Obesity*.
- 467.** Smithers, L., Mol, B., Wilkinson, C., & Lynch, J. (2016). Implications of caesarean section for children's school achievement: a population-based study. *Australian and New Zealand Journal of Obstetrics and Gynaecology*, 56(4), 374-380.
- 468.** Smithers, L. G., & Rebuli, M. (2016). Infant Nutrition and Obesity. In S. I. Ahmad & S. K. Imam (Eds.), *Obesity: A Practical Guide* (pp. 297-307). Switzerland: Springer.
- 469.** Smogavec, M., Cleall, A., Hoyer, J., Lederer, D., Nassogne, M., Palmer, E., Deprez, M., Benoit, V., Maystadt, I., Noakes, C., Leal, A., Shaw, M., Gecz, J., Raymond, L., Reis, A., Shears, D., Brockmann, K., & Zweier, C. (2016). Eight further individuals with intellectual disability and epilepsy carrying bi-allelic CNTNAP2 aberrations allow delineation of the mutational and phenotypic spectrum. *Journal of Medical Genetics*, 53(12), 820-827.
- 470.** Spooner, R., Lushington, K., Keage, H., Blunden, S., Kennedy, J., Schembri, M., Wabnitz, D., Martin, A., & Kohler, M. (2016). Cognition, temperament, and cerebral blood flow velocity in toddlers and preschool children with sleep-disordered breathing or behavioral insomnia of childhood. *Sleep Medicine*, 21(C), 77-85.
- 471.** Stahr, C., Samarage, C., Donnelley, M., Farrow, N., Morgan, K., Zosky, G., Boucher, R., Siu, K., Mall, M., Parsons, D., Dubsky, S., & Fouras, A. (2016). Quantification of heterogeneity in lung disease with image-based pulmonary function testing. *Scientific Reports*, 6.
- 472.** Stallman, H., Kohler, M., Wilson, A., Biggs, S., Dollman, J., Martin, J., Kennedy, D., & Lushington, K. (2016). Self-reported sleepwalking in Australian senior secondary school students. *Sleep Medicine*, 25(C), 1-3.
- 473.** Stark, M., Hodyl, N., Belegar V, K., & Andersen, C. (2016). Intrauterine inflammation, cerebral oxygen consumption and susceptibility to early brain injury in very preterm newborns. *Archives of Disease in Childhood: Fetal and Neonatal Edition*, 101(2), F137-F142.
- 474.** Stessman, H., Willemsen, M., Fenckova, M., Penn, O., Hoischen, A., Xiong, B., Wang, T., Hoekzema, K., Vives, L., Vogel, I., Brunner, H., Van Der Burgt, I., Ockeloen, C., Schuurshoeijmakers, J., Klein Wassink-Ruiter, J., Stumpel, C., Stevens, S., Vles, H., Marcelis, C., Van Bokhoven, H., Cantagrel, V., Colleaux, L., Nicouleau, M., Lyonnet, S., Bernier, R., Gerdt, J., Coe, B., Romano, C., Alberti, A., Grillo, L., Scuderi, C., Nordenskjöld, M., Kvarnung, M., Guo, H., Xia, K., Piton, A., Gerard, B., Genevieve, D., Delobel, B., Lehalle, D., Perrin, L., Prieur, F., Thevenon, J., Gecz, J., Shaw, M., Pfundt, R., Keren, B., Jacquette, A., Schenck, A., Eichler, E., & Kleefstra, T. (2016). Disruption of POGZ Is Associated with Intellectual Disability and Autism Spectrum Disorders. *American Journal of Human Genetics*, 98(3), 541-552.
- 475.** Stevens, N., Hatjopolous, A., Fraser, C., Alsharif, M., Diener, K., & Hayball, J. (2016). Preserved antiviral adaptive immunity following polyclonal antibody immunotherapy for severe murine influenza infection. *Scientific Reports*, 6(29154), 1-13.
- 476.** Street, J. M., Marshall, H., Braunack-Mayer, A. J., Rogers, W. A., Ryan, P., & The Fluvivets, T. (2016). Seeking Community Views on Allocation of Scarce Resources in a Pandemic in Australia: Two Methods, Two Answers. In S. Dodds & R. A. Ankeny (Eds.), *Big Picture Bioethics: Developing Democratic Policy in Contested Domains* (pp. 245-261). Switzerland: Springer.
- 477.** Sullivan, S., Carville, K., Chilver, M., Fielding, J., Grant, K., Kelly, H., Levy, A., Stocks, N., Tempone, S., & Regan, A. (2016). Pooled influenza vaccine effectiveness estimates for Australia, 2012-2014. *Epidemiology and Infection*, 144(11), 2317-2328.
- 478.** Sun, W., Dimasi, D., Pitman, M., Zhuang, Y., Hedde, R., Pitson, S., Grimbaldeston, M., & Bonder, C. (2016). Topical application of fingolimod perturbs cutaneous inflammation. *Journal of Immunology*, 196(9), 3854-3864.
- 479.** Suppa, A., Huang, Y., Funke, K., Ridding, M., Cheeran, B., Di Lazzaro, V., Ziemann, U., & Rothwell, J. (2016). Ten Years of Theta Burst Stimulation in Humans: Established Knowledge, Unknowns and Prospects. *Brain Stimulation*, 9(3), 323-335.
- 480.** Sutton-McDowall, M., Wu, L., Purdey, M., Abell, A., Goldys, E., MacMillan, K., Thompson, J., & Robker, R. (2016). Non-esterified fatty acid-induced endoplasmic reticulum stress in cattle cumulus oocyte complexes alters cell metabolism and developmental competence. *Biology of Reproduction*, 94(1).
- 481.** Tajik, P., Monfrance, M., van 't Hooff, J., Liem, S., Schuit, E., Bloemenkamp, K., Duvetkot, J., Nij Bijvank, B., Franssen, M., Oudijk, M., Scheepers, H., Sikkema, J., Woiski, M., Mol, B., Bekedam, D., Bossuyt, P., & Zafarmand, M. (2016). A multivariable model to guide the decision for pessary placement to prevent preterm birth in women with a multiple pregnancy: a secondary analysis of the ProTWIN trial. *Ultrasound in Obstetrics and Gynecology*, 48(1), 48-55.
- 482.** Tam, C., Rigas, G., Heilbronn, L., Matisan, T., Probst, Y., & Talbot, M. (2016). Energy Adaptations Persist 2 Years After Sleeve Gastrectomy and Gastric Bypass. *Obesity Surgery*, 26(2), 459-463.
- 483.** Tan, L., Mintoff, C., Johan, M., Ebert, B., Fedele, C., Zhang, Y., Szeto, P., Sheppard, K., McArthur, G., Foster-Smith, E., Ruszkiewicz, A., Brown, M., Bonder, C., Shackleton, M., & Ebert, L. (2016). Desmoglein 2 promotes vasculogenic mimicry in melanoma and is associated with poor clinical outcome.

Oncotarget, 7(29), 46492-46508.

- 484.** Tan, L., Xia, T., & Reece, C. (2016). Social and individual risk factors for suicide ideation among Chinese children and adolescents: A multilevel analysis. *International Journal of Psychology*.
- 485.** Tan, T., Ritter, L., Whitty, A., Fernandez, R., Moran, L., Robertson, S., Thompson, J., & Brown, H. (2016). Gray level co-occurrence matrices (GLCM) to assess microstructural and textural changes in pre-implantation embryos. *Molecular Reproduction and Development*, 83(8), 701-713.
- 486.** Taylor, A., Pilkington, R., Montgomerie, A., & Feist, H. (2016). The role of business size in assessing the uptake of health promoting workplace initiatives in Australia. *BMC Public Health*, 16(1), 1-8.
- 487.** Teede, H., & Moran, L. (2016). Lifestyle Factors Focused on Diet and Physical Activity: Recommendations Preconception and during Pregnancy. *Seminars in Reproductive Medicine*, 34(2), 65-66.
- 488.** Ten Eikelder, M., Mast, K., Van Der Velden, A., Bloemenkamp, K., & Mol, B. (2016). Induction of Labor Using a Foley Catheter or Misoprostol: A Systematic Review and Meta-analysis. *Obstetrical and Gynecological Survey*, 71(10), 620-630.
- 489.** Ten Eikelder, M., Oude Rengerink, K., Jozwiak, M., De Leeuw, J., De Graaf, I., Van Pampus, M., Holswilder, M., Oudijk, M., Van Baaren, G., Pernet, P., Bax, C., Van Unnik, G., Martens, G., Porath, M., Van Vliet, H., Rijnders, R., Feitsma, A., Roumen, F., Van Loon, A., Versendaal, H., Weinans, M., Woiski, M., Van Beek, E., Hermesen, B., Mol, B., & Bloemenkamp, K. (2016). Induction of labour at term with oral misoprostol versus a Foley catheter (PROBAAT-II): A multicentre randomised controlled non-inferiority trial. *The Lancet*, 387(10028), 1619-1628.
- 490.** Ten Eikelder, M., Rengerink, K., Jozwiak, M., De Leeuw, J., De Graaf, I., Van Pampus, M., Holswilder, M., Oudijk, M., Van Baaren, G., Pernet, P., Bax, C., Van Unnik, G., Martens, G., Porath, M., Van Vliet, H., Rijnders, R., Feitsma, A., Roumen, F., Van Loon, A., Versendaal, H., Weinans, M., Woiski, M., Van Beek, E., Hermesen, B., Mol, B., & Bloemenkamp, K. (2016). Induction of labour at term with oral misoprostol versus a foley catheter (PROBAAT-II): A multicentre randomised controlled non-inferiority trial. *Obstetrical and Gynecological Survey*, 71(8), 447-449.
- 491.** ter Haar, N., Jeyaratnam, J., Lachmann, H., Simon, A., Brogan, P., Doglio, M., Cattalini, M., Anton, J., Modesto, C., Quartier, P., Hoppenreijts, E., Martino, S., Insalaco, A., Cantarini, L., Lepore, L., Alessio, M., Calvo Penades, I., Boros, C., Consolini, R., Rigante, D., Russo, R., Pachlopnik Schmid, J., Lane, T., Martini, A., Ruperto, N., Frenkel, J., & Gattorno, M. (2016). The phenotype and genotype of mevalonate kinase deficiency: a series of 114 cases from the Eurofever Registry. *Arthritis and Rheumatology*, 68(11), 2795-2805.
- 492.** Thomas, C., Forrest, A., Klingberg, H., Moore, D., Abu-Assi, R., Barry, S., & Khurana, S. (2016). Does gastrostomy placement with concurrent fundoplication increase the risk of gastrostomy-related complications? *Journal of Pediatric Gastroenterology and Nutrition*, 63(1), 29-33.
- 493.** Thompson, J., Brown, H., & Sutton-McDowall, M. (2016). Measuring embryo metabolism to predict embryo quality. *Reproduction Fertility and Development*, 28(2), 41-50.
- 494.** Tieu, J., Lester, S., Whittle, S., Peh, C. A., Goldblatt, F., Proudman, S., Maddison, J., Hedger, S., & Hill, C. (2016). Rituximab In Systemic Lupus Erythematosus: A Review Of Use In South Australia. *Internal Medicine Journal*, 46, 35-35.
- 495.** Tjon-Kon-Fat, R., Bendsdorp, A., Scholten, I., Repping, S., Van Wely, M., Mol, B., & Van Der Veen, F. (2016). IUI and IVF for unexplained subfertility: Where did we go wrong? *Human Reproduction*, 31(12), 2665-2667.
- 496.** Tjon-Kon-Fat, R., Tajik, P., Custers, I., Bossuyt, P., Van Der Veen, F., Van Wely, M., Mol, B., & Zafarmand, M. (2016). Can we identify subfertile couples that benefit from immediate in vitro fertilisation over intrauterine insemination? *European Journal of Obstetrics Gynecology and Reproductive Biology*, 202(C), 36-40.
- 497.** Coates, P., & Grey, S. (2016). Finding a new home for islet cell transplants. *Transplantation*, 100(7), 1398-1399.
- 498.** Tomusange, K., Wijesundara, D., Gummow, J., Garrod, T., Li, Y., Gray, L., Churchill, M., Grubor-Bauk, B., & Gowans, E. (2016). A HIV-Tat/C4-binding protein chimera encoded by a DNA vaccine is highly immunogenic and contains acute EcoHIV infection in mice. *Scientific Reports*, 6.
- 499.** Tomusange, K., Wijesundara, D., Gummow, J., Wesselingh, S., Suhrbier, A., Gowans, E., & Grubor-Bauk, B. (2016). Mucosal vaccination with a live recombinant rhinovirus followed by intradermal DNA administration elicits potent and protective HIV-specific immune responses. *Scientific Reports*, 6.
- 500.** Toohar, R., Collins, J., Braunack-Mayer, A., Burgess, T., Skinner, S., O'Keefe, M., Watson, M., & Marshall, H. (2016). Intersectoral collaboration to implement school-based health programmes: Australian perspectives. *Health Promotion International*, Online (2), 1-10.
- 501.** Tsend-Ayush, E., He, C., Myers, M., Andrikopoulos, S., Wong, N., Sexton, P., Wooten, D., Forbes, B., & Grutzner, F. (2016). Monotreme glucagon-like peptide-1 in venom and gut: One gene - Two very different functions. *Scientific Reports*, 6.
- 502.** Tuckerman, J., Shrestha, L., Collins, J., & Marshall, H. (2016). Understanding motivators and barriers of hospital-based obstetric and pediatric health care worker influenza vaccination programs in Australia. *Human Vaccines and Immunotherapeutics*, 12(7), 1749-1756.
- 503.** Tuckerman, J., Thomas, N., & Marshall, H. (2016). Should professionals caring for children be vaccinated? Community perspectives on health care and child care worker immunisation. *Vaccine*, 34(14), 1726-1732.
- 504.** Umer, M., Qadir, I., Abbasi, N., Das, J., & Lassi, Z. (2016). Radiotherapy for localised Ewing's sarcoma in children. *Cochrane Database Of Systematic Reviews*, 2016(10).
- 505.** van Bon, B., Coe, B., Bernier, R., Green, C., Gerdts, J., Witherspoon, K., Kleefstra, T., Willemsen, M., Kumar, R., Bosco, P., Fichera, M., Li, D., Amaral, D., Cristofoli, F., Peeters, H., Haan, E., Romano, C., Mefford, H., Scheffer, I., Gecz, J., de Vries, B., & Eichler, E. (2016). Disruptive de novo mutations of DYRK1A lead to a syndromic form of autism and ID. *Molecular Psychiatry*, 21(1), 126-132.
- 506.** Van De Mheen, L., Everwijn, S., Haak, M., Manten, G., Zondervan, H., Knapen, M., Engels, M., Erwich, J., Coumans, A., Van Vugt, J., Bilardo, C., Van Pampus, M., De Groot, C., Mol, B., & Pajkrt, E. (2016). Outcome of Multifetal Pregnancy Reduction in Women with a Dichorionic Triamniotic Triplet Pregnancy to a Singleton Pregnancy: A Retrospective Nationwide Cohort Study. *Fetal Diagnosis and Therapy*, 40(2), 94-99.
- 507.** Van De Mheen, L., Ravelli, A., Oudijk, M., Bijvank, S., Porath, M., Duvekot, J., Scholtenhuis, M., Bloemenkamp, K., Scheepers, H., Woiski, M., Pampus, M., Groot, C., Pajkrt, E., & Mol, B. (2016). Prediction of Time to Delivery Week-by-Week in Women with a Triplet Pregnancy. *American Journal of Perinatology*, 33(14), 1394-1400.
- 508.** van de Ven, J., van Deursen, F., van Runnard Heimel, P., Mol, B., & Oei, S. (2016). Effectiveness of team training in managing shoulder dystocia: a retrospective study. *Journal of Maternal-Fetal and Neonatal Medicine*, 29(19), 3167-3171.
- 509.** van Dijk, S., Zhou, J., Peters, T., Buckley, M., Sutcliffe, B., Oytam, Y., Gibson, R., McPhee, A., Yelland, L., Makrides, M., Molloy, P., & Muhlhauser, B. (2016). Effect of prenatal DHA supplementation on the infant epigenome: results from a randomized controlled trial. *Clinical Epigenetics*, 8(1).
- 510.** Van Hanegem, N., Prins, M., Bongers, M., Opmeer, B., Sahota, D., Mol, B., & Timmermans, A. (2016). The accuracy of endometrial sampling in women with postmenopausal bleeding: A systematic review and meta-analysis. *European Journal of Obstetrics Gynecology and Reproductive Biology*, 197(C), 147-155.
- 511.** Van Hoorn, M., Hague, W., Van Pampus, M., Bezemer, D., & De Vries, J. (2016). Low-molecular-weight heparin and aspirin in the prevention of recurrent early-onset preeclampsia in women with antiphospholipid antibodies: The FRUIT-RCT. *European Journal of Obstetrics Gynecology and Reproductive Biology*, 197(C), 168-173.
- 512.** Van Kesteren, F., Visser, S., Hermes, W., Teunissen, P., Franx, A., Van Pampus, M., Mol, B., & De Groot, C. (2016). Counselling and management of cardiovascular risk factors after preeclampsia. *Hypertension in Pregnancy*, 35(1), 55-61.
- 513.** van Oers, A., Groen, H., Mutsaerts, M., Burggraaff, J., Kuchenbecker, W., Perquin, D., Koks, C., van Golde, R., Kaaijk, E., Schierbeek, J., Oosterhuis, G., Broekmans,

- F., Vogel, N., Land, J., Mol, B., Hoek, A., & group, L. I. s. (2016). Effectiveness of lifestyle intervention in subgroups of obese infertile women: a subgroup analysis of a RCT. *Human Reproduction*, 31(12), 2704-2713.
- 514.** Van Ryswyk, E., Middleton, P., Hague, W., & Crowther, C. (2016). Women's views on postpartum testing for type 2 diabetes after gestational diabetes: Six month follow-up to the DIAMIND randomised controlled trial. *Primary Care Diabetes*, 10(2), 91-102.
- 515.** van t Hooft, J., Duffy, J., Daly, M., Williamson, P., Meher, S., Thom, E., Saade, G., Alfirevic, Z., Mol, B., & Khan, K. (2016). A core outcome set for evaluation of interventions to prevent preterm birth. *Obstetrics and Gynecology*, 127(1), 49-58.
- 516.** van t Hooft, J., Vink, M., Opmeer, B., Ensing, S., Kwee, A., & Mol, B. (2016). ST-analysis in electronic foetal monitoring is cost-effective from both the maternal and neonatal perspective. *Journal of Maternal-Fetal and Neonatal Medicine*, 29(20), 3260-3265.
- 517.** van Tilborg, T., Broekmans, F., Dólleman, M., Eijkemans, M., Mol, B., Laven, J., & Torrance, H. (2016). Individualized follicle-stimulating hormone dosing and in vitro fertilization outcome in agonist downregulated cycles: a systematic review. *Acta Obstetrica et Gynecologica Scandinavica*, 95(12), 1333-1344.
- 518.** van Vliet, E., Dijkema, G., Schuit, E., Heida, K., Roos, C., van der Post, J., Parry, E., McCowan, L., Lyell, D., El-Sayed, Y., Carr, D., Clark, A., Mahdy, Z., Uma, M., Sayin, N., Varol, G., Mol, B., & Oudijk, M. (2016). Nifedipine maintenance tocolysis and perinatal outcome: an individual participant data meta-analysis. *BJOG: An International Journal of Obstetrics and Gynaecology*, 123(11), 1753-1760.
- 519.** Van Vliet, E., Nijman, T., Schuit, E., Heida, K., Opmeer, B., Kok, M., Gyselaers, W., Porath, M., Woiski, M., Bax, C., Bloemenkamp, K., Scheepers, H., Jacquemyn, Y., Beek, E., Duvekot, J., Franssen, M., Papatsonis, D., Kok, J., Van Der Post, J., Franx, A., Mol, B., & Oudijk, M. (2016). Nifedipine versus atosiban for threatened preterm birth (APOSTEL III): a multicentre, randomised controlled trial. *The Lancet*, 387(10033), 2117-2124.
- 520.** Van Vliet, E., Nijman, T., Schuit, E., Heida, K., Opmeer, B., Kok, M., Gyselaers, W., Porath, M., Woiski, M., Bax, C., Bloemenkamp, K., Scheepers, H., Jacquemyn, Y., Van Beek, E., Duvekot, J., Franssen, M., Papatsonis, D., Kok, J., Van Der Post, J., Franx, A., Mol, B., & Oudijk, M. (2016). Nifedipine Versus Atosiban for Threatened Preterm Birth (APOSTEL III): A Multicenter, Randomized Controlled Trial. *Obstetrical and Gynecological Survey*, 71(9), 514-516.
- 521.** van Vliet, E., Seinen, L., Roos, C., Schuit, E., Scheepers, H., Bloemenkamp, K., Duvekot, J., van Eyck, J., Kok, J., Lotgering, F., van Baar, A., van Wassenaer-Leemhuis, A., Franssen, M., Porath, M., van der Post, J., Franx, A., Mol, B., & Oudijk, M. (2016). Maintenance tocolysis with nifedipine in threatened preterm labour: 2-year follow up of the offspring in the APOSTEL II trial. *BJOG: An International Journal of Obstetrics and Gynaecology*, 123(7), 1107-1114.
- 522.** Van Zijl, M., Koullali, B., Mol, B., Pajkrt, E., & Oudijk, M. (2016). Prevention of preterm delivery: Current challenges and future prospects. *International Journal of Women's Health*, 8, 633-645.
- 523.** Varcoe, T., Voultzios, A., Gatford, K., & Kennaway, D. (2016). The impact of prenatal circadian rhythm disruption on pregnancy outcomes and long-term metabolic health of mice progeny. *Chronobiology International*, 33(9), 1171-1181.
- 524.** Verburg, P., Tucker, G., Scheil, W., Erwich, J., Dekker, G., & Roberts, C. (2016). Seasonality of gestational diabetes mellitus: A South Australian population study. *BMJ Open Diabetes Research and Care*, 4(1), 1-8.
- 525.** Verburg, P., Tucker, G., Scheil, W., Erwich, J., Dekker, G., & Roberts, C. (2016). Sexual dimorphism in adverse pregnancy outcomes - A retrospective Australian population study 1981-2011. *Plos One*, 11(7).
- 526.** Verhoeven, C., Nuij, C., Janssen-Rolf, C., Schuit, E., Bais, J., Oei, S., & Mol, B. (2016). Predictors for failure of vacuum-assisted vaginal delivery: A case-control study. *European Journal of Obstetrics Gynecology and Reproductive Biology*, 200(C), 29-34.
- 527.** Vervoort, A., Uittenbogaard, L., Hehenkamp, W., Brölmann, H., Mol, B., & Huirne, J. (2016). Why do niches develop in caesarean uterine scars? Hypotheses on the aetiology of niche development. *Obstetrical and Gynecological Survey*, 71(2), 83-84.
- 528.** Voormolen, D., Abell, S., James, R., Hague, W., & Mol, B. (2016). Diagnostic Criteria and Treatment for Gestational Diabetes Mellitus. *Seminars in Reproductive Medicine*, 34(2), 102-109.
- 529.** Wang, B., Giles, L., Afzali, H., Clarke, M., Ratcliffe, J., Chen, G., & Marshall, H. (2016). Adolescent confidence in immunisation: Assessing and comparing attitudes of adolescents and adults. *Vaccine*, 34(46), 5595-5603.
- 530.** Wang, R., & Mol, B. (2016). Every cycle counts. *Human Reproduction*, 31(4), 915.
- 531.** Ward, J., Dyda, A., McGregor, S., Rumbold, A., Garton, L., Donovan, B., Kaldor, J., & Guy, R. (2016). Low HIV testing rates among people with a sexually transmissible infection diagnosis in remote aboriginal communities. *Medical Journal of Australia*, 205(4), 168-171.
- 532.** Warin, M. J. (2016). Relatedness in Anorexia. In L. Manderson, A. Hardon, & E. Cartwright (Eds.), *The Routledge Handbook of Medical Anthropology* (Vol. 1, pp. 125-129). London: Routledge.
- 533.** Warin, M. J., Moore, V., Davies, M., & Ulijaszek, S. (2016). Epigenetics and obesity: the reproduction of habitus through Intracellular and social environments. *Body and Society*, 22(4), 53-78.
- 534.** Waterfall, H., Grivell, R., & Dodd, J. (2016). Techniques for assisting difficult delivery at caesarean section. *Cochrane Database Of Systematic Reviews*.
- 535.** Wechalekar, H., Setchell, B., Pilkington, K., Leigh, C., Breed, W., & Peirce, E. (2016). Effects of whole-body heat on male germ cell development and sperm motility in the laboratory mouse. *Reproduction, Fertility and Development*, 28(5), 545-555.
- 536.** Weiland, F., Arentz, G., Klingler-Hoffmann, M., McCarthy, P., Lokman, N., Kaur, G., Oehler, M., & Hoffmann, P. (2016). A novel IEF peptide fractionation method reveals a detailed profile of N-terminal Acetylation in chemotherapy-responsive and -resistant ovarian cancer cells. *Journal of Proteome Research*, 15(11), 4073-4081.
- 537.** Wells, R., & Tonkin, A. (2016). Clinical approach to autonomic dysfunction. *Internal Medicine Journal*, 46(10), 1134-1139.
- 538.** Whiting, G., Magin, P., Morgan, S., Tapley, A., Henderson, K., Oldmeadow, C., Ball, J., van Driel, M., Spike, N., McArthur, L., Scott, J., & Stocks, N. (2016). General practice trainees' clinical experience of dermatology indicates a need for improved education: A cross-sectional analysis from the Registrar Clinical Encounters in Training Study. *Australasian Journal of Dermatology*.
- 539.** Whitrow, M., Moran, L., Davies, M., Collins, C., Burrows, T., Edwards, S., & Moore, V. (2016). Core food intakes of Australian children aged 9-10 years: nutrients, daily servings and diet quality in a community cross-sectional sample. *Journal of Human Nutrition and Dietetics*, 29(4), 449-457.
- 540.** Wijs, L. A., de Graaff, E. C., Leemaqz, S., & Dekker, G. (2016). Causes of stillbirth in a socioeconomically disadvantaged urban Australian population - a comprehensive analysis. *The journal of maternal-fetal & neonatal medicine: the official journal of the European Association of Perinatal Medicine, the Federation of Asia and Oceania Perinatal Societies, the International Society of Perinatal Obstetricians*, 1-7.
- 541.** Wilkinson, D., Shepherd, E., & Wallace, E. (2016). Melatonin for women in pregnancy for neuroprotection of the fetus. *Cochrane Database Of Systematic Reviews*, 2016(3).
- 542.** Williams, R., Heilbronn, L., Chen, D., Coster, A., Greenfield, J., & Samochoa-Bonet, D. (2016). Dietary acid load, metabolic acidosis and insulin resistance - Lessons from cross-sectional and overfeeding studies in humans. *Clinical Nutrition*, 35(5), 1084-1090.
- 543.** Wilms, F., Vis, J., Oudijk, M., Kwee, A., Porath, M., Scheepers, H., Spaanderman, M., Bloemenkamp, K., Bolte, A., Bax, C., Cornette, J., Duvekot, J., Nij Bijvanck, B., Eijck, J., Franssen, M., Sollie, K., Vandenbussche, F., Woiski, M., van der Post, J., Bossuyt, P., Opmeer, B., Mol, B., & van Baaren, G. (2016). The impact of fetal gender and ethnicity on the risk of spontaneous preterm delivery in women with symptoms of preterm labor. *Journal of Maternal-Fetal and Neonatal Medicine*, 29(21), 3563-3569.
- 544.** Wilson, R., Grieger, J., Bianco-Miotto, T., & Roberts, C. (2016). Association between maternal zinc status, dietary zinc intake and pregnancy complications: a systematic review. *Nutrients*, 8(10), 1-28.

- 545.** Woiski, M., van Vugt, H., Dijkman, A., Grol, R., Marcus, A., Middeldorp, J., Mol, B., Mols, F., Oudijk, M., Porath, M., Scheepers, H., & Hermens, R. (2016). From Postpartum Haemorrhage Guideline to Local Protocol: A Study of Protocol Quality. *Maternal and Child Health Journal*, 20(10), 2160-2168.
- 546.** Wojcieszek, A., Boyle, F., Belizán, J., Cassidy, J., Cassidy, P., Erwich, J., Farrales, L., Gross, M., Heazell, A., Leisher, S., Mills, T., Murphy, M., Pettersson, K., Ravaldi, C., Ruidiaz, J., Siassakos, D., Silver, R., Storey, C., Vannacci, A., Middleton, P., Ellwood, D., & Flenady, V. (2016). Care in subsequent pregnancies following stillbirth: An international survey of parents. *BJOG: An International Journal of Obstetrics and Gynaecology*.
- 547.** Wojcieszek, A. M., Shepherd, E. S., Middleton, P., Lassi, Z., Wilson, T., Heazell, A. E. P., Ellwood, D. A., & Flenady, V. (2016). Care prior to and during subsequent pregnancies following stillbirth for improving outcomes (Protocol). *Cochrane Database Of Systematic Reviews*, 2016(5),.
- 548.** Wong, A., Cheung, C., Fung, L., Lao, T., Mol, B., & Sahota, D. (2016). Development and validation of prediction models for endometrial cancer in postmenopausal bleeding. *European Journal of Obstetrics Gynecology and Reproductive Biology*, 203(C), 220-224.
- 549.** Wooldridge, A. L., McMillan, M., Marshall, H. S., & Gatford, K. L. (2016). Relationship between birth weight or fetal growth rate and postnatal allergy: a systematic review protocol. *JBI database of systematic reviews and implementation reports*, 14(11), 11-20.
- 550.** Worton, L. E., Shi, Y. C., Smith, E. J., Barry, S. C., Gonda, T. J., Whitehead, J. P., & Gardiner, E. M. (2016). Ectodermal-Neural Cortex 1 Isoforms Have Contrasting Effects on MC3T3-E1 Osteoblast Mineralization and Gene Expression. *Journal of Cellular Biochemistry*.
- 551.** Wouldes, T., Battin, M., Coat, S., Rush, E., Hague, W., & Rowan, J. (2016). Neurodevelopmental outcome at 2 years in offspring of women randomised to metformin or insulin treatment for gestational diabetes. *Archives of Disease in Childhood: Fetal and Neonatal Edition*, 101(6), F488-F493.
- 552.** Wu, J., Dal Grande, E., Winefield, H., Broderick, D., Pilkington, R., Gill, T., & Taylor, A. (2016). Parent-reported Mental Health Problems and Mental Health Services Use in South Australian School-aged Children. *AMIS Public Health*, 3(4), 750-768.
- 553.** Wyatt, C., Coates, P., & Reeves, W. (2016). Of mice and women: do sex-dependent responses to ischemia-reperfusion injury in rodents have implications for delayed graft function in humans? *Kidney International*, 90(1), 10-13.
- 554.** Yakoob, M., Salam, R., Khan, F., & Bhutta, Z. (2016). Vitamin D supplementation for preventing infections in children under five years of age. *Cochrane Database Of Systematic Reviews*, 2016(11).
- 555.** Yelland, L., Gajewski, B., Colombo, J., Gibson, R., Makrides, M., & Carlson, S. (2016). Predicting the effect of maternal docosa-hexaenoic acid (DHA) supplementation to reduce early preterm birth in Australia and the United States using results of within country randomized controlled trials. *Prostaglandins Leukotrienes and Essential Fatty Acids*, 112(C), 44-49.
- 556.** Yelland, L., Makrides, M., McPhee, A., Quinlivan, J., & Gibson, R. (2016). Importance of adequate sample sizes in fatty acid intervention trials. *Prostaglandins, Leukotrienes and Essential Fatty Acids*, 107(C), 8-11.
- 557.** Yelland, L., Sullivan, T., Pavlou, M., & Seaman, S. (2016). Response to Klebanoff. *Paediatric and Perinatal Epidemiology*, 30(2), 206.
- 558.** Yue, Z., Liu, X., Coates, P., & Wallace, G. (2016). Advances in printing biomaterials and living cells: implications for islet cell transplantation. *Current Opinion in Organ Transplantation*, 21(5), 467-475.
- 559.** Zerem, A., Haginoya, K., Lev, D., Blumkin, L., Kivity, S., Linder, I., Shoubridge, C., Palmer, E., Field, M., Boyle, J., Chitayat, D., Gaillard, W., Kossoff, E., Willems, M., Geneviève, D., Tran-Mau-Them, F., Epstein, O., Heyman, E., Dugan, S., Masurel-Paulet, A., Piton, A., Kleefstra, T., Pfundt, R., Sato, R., Tzschach, A., Matsumoto, N., Saitou, H., Leshinsky-Silver, E., & Lerman-Sagie, T. (2016). The molecular and phenotypic spectrum of IQSEC2-related epilepsy. *Epilepsia*, 57(11), 1858-1869.
- 560.** Zhang, C., Arentz, G., Winderbaum, L., Lokman, N., Klingler-Hoffmann, M., Mittal, P., Carter, C., Oehler, M., & Hoffmann, P. (2016). MALDI mass spectrometry imaging reveals decreased CK5 levels in vulvar squamous cell carcinomas compared to the precursor lesion differentiated vulvar intraepithelial neoplasia. *International Journal of Molecular Sciences*, 17(7).
- 561.** Zhang, L., Lee, G., Liu, X., Pascoe, E., Badve, S., Boudville, N., Clayton, P., Hawley, C., Kanellis, J., McDonald, S., Peh, C., Polkinghorne, K., & Johnson, D. (2016). Long-term outcomes of end-stage kidney disease for patients with lupus nephritis. *Kidney International*, 89(6), 1337-1345.
- 562.** Zhang, L., Liu, X., Pascoe, E., Badve, S., Boudville, N., Clayton, P., De Zoysa, J., Hawley, C., Kanellis, J., McDonald, S., Peh, C., Polkinghorne, K., & Johnson, D. (2016). Long-term outcomes of end-stage kidney disease for patients with IgA nephropathy: a multi-centre registry study. *Nephrology*, 21(5), 387-396.
- 563.** Zhang, S., Barker, P., Botting, K., Roberts, C., McMillan, C., McMillen, I., & Morrison, J. (2016). Early restriction of placental growth results in placental structural and gene expression changes in late gestation independent of fetal hypoxemia. *Physiological Reports*, 4(23).
- 564.** Zhu, F., Wang, F., Yang, X., Zhang, J., Wu, H., Zhang, Z., Zhang, Z., He, X., Zhou, P., Wei, Z., Gecz, J., & Cao, Y. (2016). Biallelic SUN5 mutations cause autosomal-recessive acephalic spermatozoa syndrome. *American Journal of Human Genetics*, 99(4), 942-949.
- 565.** Zhu, F., Wang, F., Yang, X., Zhang, J., Wu, H., Zhang, Z., Zhang, Z., He, X., Zhou, P., Wei, Z., Gecz, J., & Cao, Y. (2016). Erratum: Biallelic SUN5 Mutations Cause Autosomal-Recessive Acephalic Spermatozoa Syndrome. *American Journal of Human Genetics*, 99(6), 1405.
- 566.** Zhuang, Q., Liu, Q., Divito, S., Zeng, Q., Yatim, K., Hughes, A., Rojas-Canales, D., Nakao, A., Shufesky, W., Williams, A., Humar, R., Hoffman, R., Shlomchik, W., Oberbarnscheidt, M., Lakkis, F., & Morelli, A. (2016). Graft-infiltrating host dendritic cells play a key role in organ transplant rejection. *Nature Communications*, 7.
- 567.** Zubrick, S., Hafekost, J., Johnson, S., Lawrence, D., Saw, S., Sawyer, M., Ainley, J., & Buckingham, W. (2016). Self-harm: prevalence estimates from the second Australian Child and Adolescent Survey of Mental Health and Wellbeing. *Australian and New Zealand Journal of Psychiatry*, 50(9), 911-921.
- 568.** Zubrick, S., Hafekost, J., Johnson, S., Lawrence, D., Saw, S., Sawyer, M., Ainley, J., & Buckingham, W. (2016). Suicidal behaviours: Prevalence estimates from the second Australian Child and Adolescent Survey of Mental Health and Wellbeing. *Australian and New Zealand Journal of Psychiatry*, 50(9), 899-910.
- 569.** Zurzolo, G., Koplin, J., Ponsonby, A., McWilliam, V., Dharmage, S., Heine, R., Tang, M., Prescott, S., Campbell, D., Loh, R., Rueter, K., Netting, M., Frith, K., Norton, W., Said, M., Gold, M., Lee, N., Mathai, M., de Courten, M., & Allen, K. (2016). Consensus of stakeholders on precautionary allergen labelling: A report from the Centre for Food and Allergy Research. *Journal of Paediatrics and Child Health*, 52(8), 797-801.



THE UNIVERSITY
of ADELAIDE



Support the Robinson Research Institute

For more information about the Institute visit:
adelaide.edu.au/robinson-research-institute

seek LIGHT

 **Robinson
Research Institute**
Healthy children for life.

Support Us

Donate online at alumni.adelaide.edu.au/donaterobinson or complete and mail this form

Personal details

Name:

Address:

.....

State: Postcode:

Telephone:

Email:

Donation

Yes! I would like to make a donation of \$ _____ to the University of Adelaide to progress the research of the Robinson Research Institute.

I enclose:

Cash Cheque

Credit Card Visa Mastercard

Card number

Security Code Expiry Date

----- / -----

Name on card

.....

Signature

.....

All donations to

External Relations
The University of Adelaide
Reply Paid 498
Adelaide SA 5001

Privacy Statement

The primary purpose of information collected is for processing and receipting your gift. Secondary purposes may include updating your donation records, stewardship and for future fundraising approaches. If you do not wish the information provided here to be used for these secondary uses please let us know. If you have any privacy concerns or would like to verify information held about you please contact 08 8313 5800. The University of Adelaide's privacy policy can be found at: www.adelaide.edu.au/policies/62/





For further enquiries

Robinson Research Institute
Ground Floor, Norwich Centre
55 King William Road
The University of Adelaide, SA 5005 Australia

Telephone: +61 8 8313 8166

Email: robinsonresearch@adelaide.edu.au

 adelaide.edu.au/robinson-research-institute

 facebook.com/RobsInstitute

 twitter.com/RobsInstitute

 youtube.com/RobinsonInstitute

DISCLAIMER: The information in this publication is current as at the date of printing and is subject to change. You can find updated information on our website at adelaide.edu.au. With the aim of continual improvement the University of Adelaide is committed to regular reviews of the degrees, diplomas, certificates and courses on offer. As a result the specific programs and courses available will change from time to time. Please refer to adelaide.edu.au for the most up to date information or contact us on 1800 061 459. The University of Adelaide assumes no responsibility for the accuracy of information provided by third parties.

CRICOS 00123M © The University of Adelaide. Published July 2016