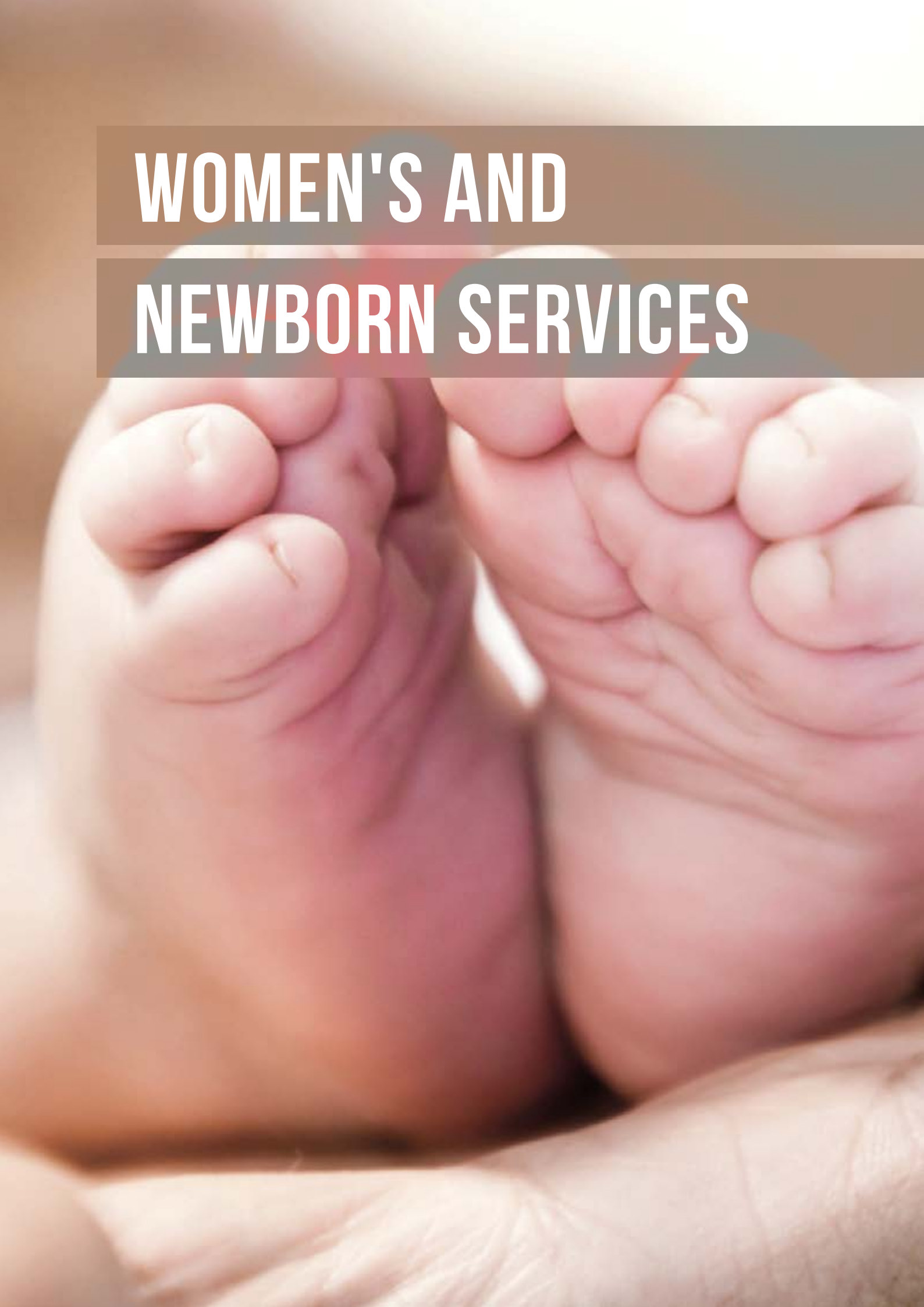


WOMEN'S AND

NEWBORN SERVICES



Women's and Newborn Services



Jessica Toleman
Acting Executive Director
Women's and Newborn Services

Women's and Newborn Services (WNS) offer a wide and diverse range of healthcare services to women and their babies across Queensland and beyond. We are dedicated to quality multidisciplinary healthcare which is evident in our commitment to expanding research within the service line.

WNS continues to maintain an active interest in research activities as well as the provision of multiple education programs for undergraduate and postgraduate health service professionals. To that end we maintain a strong connection with universities and colleges including the University of Queensland, Queensland University of Technology, James Cook University, Central Queensland University, Australian Catholic University and the Royal Australian and New Zealand College of Obstetrics and Gynaecology (RANZCOG).

The Queensland Centre for Gynaecological Cancer (QGC) Research's mission is to research and develop the best standard of care for women experiencing gynaecological cancer. This includes finding causes for and preventing gynaecological cancer; and finding better treatment options to cure women affected by gynaecological cancer. We have a focus on conducting surgical clinical trials. In 2018 we continued our studies of exercise in ovarian cancer; a trial of non-surgical treatment for early stage endometrial cancer; and the IMAGINE Study which aims to implement and evaluate a model of training for practising gynaecologists in Total Laparoscopic Hysterectomy

The Perinatal Research Centre's (PRC) multidisciplinary research team aims to discover and translate research advances into clinical practice and better health outcomes for mothers and babies. Research within the PRC covers several related areas including neonatal brain injury and neuroprotection led by Dr Tracey Bjorkman, systems physiology led by Dr Barbara Lingwood and Dr Yvonne Eiby, signal processing led by Prof Boualem Boashash as well as clinical trials involving the Royal Brisbane and Women's Hospital.

The Grantley Stable Neonatal Unit (GSNU) continues to have an interest in a varying number of research opportunities and looks to further enhance collaborations between universities and internal departments. Dr Mark Davies, an eminent staff specialist in the neonatology department was promoted to Clinical Professor in October 2018, a testament to his dedication towards supporting and promoting clinical research to improve neonatal outcomes. GSNU's close collaboration with the PRC continues to translate research into clinical practice with a number of innovative projects in addition to active engagement in building research capacity.

Obstetric Medicine continues to add to the research program with a focus on women with complex pregnancies and improving the outcomes for both mother and infant. There is currently a strong focus on breastfeeding outcomes in mothers with type 1 and type 2 diabetes mellitus. In addition, the department continues to be involved in a number of collaborative research projects including a large NHMRC funded study evaluating the guided treatment of asthma in pregnancy.

The Department of Obstetrics and Gynaecology continues to increase its research and clinical activity and provides tertiary and quaternary obstetrics and gynaecology services for Metro North Hospital and Health Service and Queensland. Both departments and its subdivisions are involved in multidisciplinary research to ensure the management of the women we care for is contemporary and evidenced based. Significant research contributions continued in 2018 in the Maternal Fetal Medicine Unit, Paediatric and Adolescent Gynaecology, Urogynaecology, and Reproductive Endocrinology and Infertility specialities in Women's and Newborn Services with a number of national and international presentations and publications.



Grantley Stable Neonatal Unit (GSNU)

In 2018, the Grantley Stable Neonatal Unit Research Group formally changed their name to RBWH Neonatal Research valuing the need to be locally and internationally recognised as originating from the largest service provider of exceptional healthcare for women and babies on Australia's eastern seaboard. It continues to expand research capacity by collaborating with the Perinatal Research Centre, the University of Queensland and Griffith University as well as participating in several multi-centred NHMRC funded clinical trials which aim to improve significant short- and long-term neonatal outcomes.

In October 2018, Dr Mark Davies, a dedicated Neonatologist and current co-chair of RBWH Neonatal Research was promoted to Clinical Professor, commemorating a significant milestone in his distinguished career and inspiring trainee clinician researchers to follow his research leadership example.

Developing a strategic plan for the near future in line with the Metro North Research Strategy has been the focus for the group this year, including a determined effort towards prioritising research agendas and securing much needed research funds to improve resources. Challenging clinical questions have inspired exciting projects bringing together multi-disciplinary neonatal clinicians and scientists who are passionate about enhancing care through high quality translational research. Research priorities include optimising proficiency of service provision through systematic service evaluation and improving outcomes in neurodevelopment, nutrition and neonatal retrieval medicine.

Supervised Post-Graduate Research Students

Name (RBWH staff in bold)	Current Studies (e.g. PhD, Masters etc.) University (duration)	Research Project Title	Supervisors (RBWH staff in bold)
Donna Franklin	PhD, University of Queensland	Nasal High flow therapy in infants with bronchiolitis	John Fraser, Mark Davies
Luke Jardine	PhD, University of Queensland	Development of early predictors of long-term neurodevelopmental outcome in preterm infants	Mark Davies, Paul Colditz
Michelle Paliwoda	PhD, University of Queensland	Standardisation of neonatal physiological parameters and development of neonatal early warning tools	Karen new, Fiona Bogossian, Mark Davies
Kobi Best	PhD, University of Queensland	Sensory Exposure to Language in the Newborn Care Unit: A Multi-Method Trial of Sound and Language Exposure in Neonates Cared for in Single-Room Environments on Developmental Outcomes up to 2 years	Karen New, Fiona Bogossian, Ian Hughes, Mark Davies
Jasmine Antoine	FRACP, Royal Australasian College of Physicians	Bacterial colonisation of endotracheal tube (ETT) in infants less than 32 weeks gestation	Mark Davies, Garry Inglis
Nada Al-Theyab	PhD, University of Queensland	Body Composition in Very Preterm Infants During Their Hospital Stay	Tim Donovan , Barbara Lingwood, Yvonne Eiby, Paul Colditz
Alison D'Souza	MPhil, University of Queensland	The impact of macronutrient intake and growth on neurodevelopmental outcome in preterm infants	Tim Donovan , Barbara Lingwood, Yvonne Eiby, Paul Colditz
Ms Nur Abu Kassim	PhD, University of Queensland (2015-2017)	To investigate vitamin D and vitamin D analogues levels in human plasma	Karen Whitfield , N Shaw, A Hewavitharana
Melissa Lai	PhD, University of Queensland	Towards Optimizing Neurodevelopmental Outcomes of Very Preterm Infants; the Effects of Infant Massage by the Mother	Paul Colditz , Simon Finnigan, Jurgen Fripp
Abirami Ratnasingham	PhD, University of Queensland	Long-term consequences of altered neonatal adiposity	Barbara Lingwood, Tim Donovan , Yvonne Eiby, Marloes Dekker, Peter Davis
Annice Kong	PhD, University of Queensland	Brain structure assessed using diffusion MRI and function assessed using dense array EEG of very preterm infants and the ability to predict neurodevelopmental outcomes	Paul Colditz , Simon Finnigan, Stephen Rose, Roslyn Boyd

2018 Current RBWH Research Group / Department Led Research Activity

RBWH Research Group/Department Lead Researchers	Collaborative Researchers	Research Project Title
Deborah Gilmour	Mark Davies	What sound/light/vibration/acceleration are babies experiencing on retrievals?
Jasmine Antoine	Mark Davies	Bacterial colonisation of endotracheal tube (ETT) in infants less than 32 weeks gestation
Janet Sharpe	Mark Davies	Does earlier arrival of the retrieval team improve short-term outcomes in outborn extremely premature infants?
Janet Sharpe	Mark Davies	The availability of probiotics and donor human milk improves mortality and morbidity in very preterm infants
Didier Tshamala	Mark Davies	Does pasteurised donor human milk availability affect breast feeding
Didier Tshamala	Adam Hoellering, Mark Davies	Study of movement of umbilical venous catheters over time
Michelle Paliwoda	Mark Davies, Karen new, Fiona Bogossian	Standardisation of neonatal physiological parameters and development of neonatal early warning tools
Melissa Weber	Melissa Lai, Mark Davies	An Audit of Noise levels in a Level Six Intensive Care Neonatal Unit
Tim Donovan	Anndrea Flint, Donna Hovey, Stephanie Webster, Dr Helen Donovan	Special Care Nursery Feeding Study
Pieter Koorts	William Tarnow-Mordi, Kei Lui, Roger Soll, Paolo Manzoni, Deborah Schofield	LIFT (Lactoferrin Infant feeding trial)
Pieter Koorts	Mark Davies, Katherine White, Garry Inglis, Adam Hoellering	Propofol compared to Morphine and Midazolam for sedation for intubation in infants
Kristin O'Connor	Mark Davies	Determining the criteria for predicting successful extubation with systemic dexamethasone in premature infants
Gill Noreiks	Melissa Lai, Mark Davies	RCT – Incubator humidity for 1 or 2 weeks for ELBW babies
Mark Davies	Andrew Hutchinson	An Audit of Nutritional Intake in Infants Less Than 1000g or 28 Weeks Gestation Following change in parenteral nutrition formulations
Mark Davies	Deborah Gilmour	NeoSTRESS: Study of Transfer and Retrieval Environmental StressorS upon neonates via a smartphone application – ACCELERATION/VIBRATION
Mark Davies	Deborah Gilmour	NeoSTRESS: Study of Transfer and Retrieval Environmental StressorS upon neonates via a smartphone application – LIGHT
Mark Davies	Deborah Gilmour	NeoSTRESS: Study of Transfer and Retrieval Environmental StressorS upon neonates via a smartphone application – SOUND
Karen Whitfield	Kristin O'Connor, Mark Davies	Micronutrient levels in Infants
Tim Donovan	Paul Colditz	PEACH: Long-term Outcome of Neonatal Adiposity
Adam Hoellering	Mark Davies	Does CVP in preterm infants predict IVH?
Dayan DeAlwis	Mark Davies	Cochrane review – late surfactant in very preterm neonates who still required mechanical ventilation after day 7
Neeraj Mehta	Melissa Lai, Drum Patel	Neonatal transfusions and clinical triggers
Paul Colditz	Roslyn Boyd, A Malhotra, Stephen Rose, B Boashash, M Ditchfield, M Fahey, K Pannek, R Moldrich	PREBO Neurodevelopment of the preterm infant
Drum Patel	Pieter Koorts, Karen Langford, Lyn Chapple, Melissa Lai, Mark Davies, Kate Cogill, Nidhi Bansal	Pasteurised Donor Human Milk in late preterm and term infants: a Randomised Controlled Trial

2018 Collaborative Research Activity involving RBWH Research Group / Department

Collaborative Lead Researchers	RBWH Researchers	Research Project Title
Julie Wixey, Jany Pienaar, Paul Colditz, Ian Wright, Melissa Lai	Jany Pienaar	Retrospective study of ibuprofen administration on neurodevelopmental outcomes in IUGR neonates in Australia
Zornitz Stark, Sebastian Lunke, Marcel Dinger	Chirag Patel	Australian Genomic Health alliance; acute care genomic testing

2018 Collaborative Research Activity involving RBWH Research Group / Department (cont)

Collaborative Lead Researchers	RBWH Researchers	Research Project Title
Michelle Paliwoda	Michelle Paliwoda	Determining reference ranges for well late-preterm and term neonate's vital signs
Anndrea Flint	Mark Davies	Determining reference ranges for well term neonate's overnight oximetry
Roslyn Boyd	Pieter Koorts	NEBO: Neonatal Encephalopathy Brain Outcomes: prospective study of Clinical and MRI Biomarkers in term born infants to improve accurate and earlier prediction of Cerebral Palsy
Amanda Ullman	Colette McIntyre	NeOnatal Vascular Access (NOVA) study: an observational audit of neonatal vascular access complications
Peter Dargaville	Tim Donovan, Melissa Lai	RCT – OPTIMIST-A Trial. Multicentre randomised controlled trial of minimally-invasive surfactant therapy in preterm infants 25-28 weeks gestation on continuous positive airway pressure
Omar Kamlin, Brett Manley	Pieter Koorts	RCT – PLUS TRIAL. Multicentre Randomised Controlled Trial of Surfactant Plus Budesonide to Improve Survival Free of Bronchopulmonary Dysplasia in Extremely Preterm Infants
Elsa Wynd	Melissa Lai, Adam Hoellering	AIM-PREM: Assessing the Impact of Prematurity on REnal Medulla development
Paul Dawson	Pieter Koorts, Paul Colditz, Nadia Badawi, Roslyn Boyd, Vicki Flenady, Elizabeth Hurrion, Francis Bowling, Sailesh Kumar	Neuroprotective role of sulphate among preterm babies (SuPreme Study)
Katie Groom, Glenn Gardiner	Pieter Koorts, Renuka Sekar	RCT – Childhood Outcomes of STRIDER NZ Aus: a randomised controlled trial of sildenafil therapy in dismal prognosis early-onset intrauterine growth restriction (New Zealand and Australia)
Iona Novak	Paul Colditz	RCT – GAME: Harnessing Neuroplasticity to Improve Motor Performance in Infants with Cerebral Palsy: a Pragmatic Randomized Controlled Trial
William Tarnow-Mordi	Pieter Koorts	RCT – LIFT Does lactoferrin improve survival free from morbidity in very low birth weight infants? Lactoferrin Infant Feeding Trial: a randomised controlled trial
Helen Liley	Paul Colditz	RCT – PAEAN – Preventing Adverse Outcomes of Neonatal Hypoxic Ischaemic Encephalopathy with Erythropoietin: a Phase III Randomised Placebo Controlled Multicentre Clinical Trial
Roslyn Boyd	Paul Colditz	RCT – REACH: Randomised trial of Rehabilitation very Early in Congenital Hemiplegia
William Tarnow-Mordi	Pieter Koorts	RCT – APTS Should very preterm babies receive a placental transfusion at birth? A RCT Study – long term outcomes
Rod Hunt	Paul Colditz	RCT – NEST-A randomized controlled trial comparing the treatment of electrographic and clinical seizures, to the treatment of clinical seizures alone, in term or near-term encephalopathic infants and measuring the impact on death and neurodevelopment at 2 years. Neonatal Electrographic Seizure Trial (NEST)
Anndrea Flint	Mark Davies	A systematic review of the use of overnight oximetry in neonates
William Tarnow-Mordi	Pieter Koorts	RCT – APTS Should very preterm babies receive a placental transfusion at birth? A RCT Study – short term outcomes
Angela Berkhout	Melissa Lai	Paediatric cohort study of Herpes Simplex Infection in early infancy and meningoencephalitis in Queensland
Alicia Spittle	Pieter Koorts, Melissa Lai	Early identification of infants with cerebral palsy: implementation of evidence-based guidelines into practice

2018 Research Awards and Achievements

Recipient	Award	Event
Colette McIntyre	Best New Presenter Award	Australian College of Neonatal Nurses (ACNN) National Conference August 2018
Colette McIntyre	Best Poster Award	ANZNN Clinical Practice Improvement conference, Sept 2018
Abi Ratnasingham, Yvonne Eiby, Tim Donovan , Barbara Lingwood	Best Clinical Research Award	27 th RBWH Health Symposium, Sept 2018
Donna Hovey	National Presenters Award	Australian College of Neonatal Nurses (ACNN) National Conference August 2018

2018 Research Grants – Awarded

Investigators (RBWH staff in bold)	RBWH Research Groups/ Departments	Project Title	Granting Body	Amount in 2018	Total Amount (years)
Paul Colditz , K Khosrotehrani, Tracey Bjorkman, J Patel, Julie Wixey	Perinatal Research Centre	Stem cell treatment for neonatal hypoxic ischaemic encephalopathy	NHMRC	\$318,065	\$954,195 (2018-2020)
Paul Colditz , Barbara Lingwood, Tracey Bjorkman, P Dawson, Roslyn Boyd, Yvonne Eiby	Perinatal Research Centre	A pre-clinical intensive care facility to research long-term outcomes in neonates	UQ Major Equipment and Infrastructure (MEI) & NHMRC Equipment Grant	\$200,343	\$200,343 (2018)
Paul Colditz , K Khosrotehrani, Julie Wixey	Perinatal Research Centre	Improving brain outcomes in the growth restricted newborn using placental stem cell treatment	Financial Markets Foundation for Children Research Grant	\$46,666	\$140,000 (2018-2020)
Paul Colditz , Julie Wixey, Melissa Lai , Tracey Bjorkman	Perinatal Research Centre	Stem cell treatment to protect the growth restricted newborn brain	RBWH Foundation	\$40,000	\$40,000 (2018)
Melissa Lai , Tracey Bjorkman, Julie Wixey, Paul Colditz	Perinatal Research Centre	CO2 gas as an adjunctive neuroprotective therapy for hypoxic-ischaemic encephalopathy (HIE)	RBWH Foundation	\$40,000	\$40,000 (2018)
Paul Dawson, Elizabeth Hurron, Francis Bowling, Nadia Badawi, Roslyn Boyd, Pieter Koorts , Paul Colditz		Neuroprotective role of sulphate among preterm babies (SuPreme study)	NHMRC	\$149,867.60	\$749,338.08 (2015-2019)
Paul Colditz , Roslyn Boyd, A Malhotra, Stephen Rose, B Boashash, M Ditchfield, M Fahey, K Pannek, R Moldrich	Perinatal Research Centre	PREBO: The Preterm Brain Outcomes	NHMRC	\$329,028.20	\$1,645,141 (2015-2019)
Paul Colditz , K Khosrotehrani, Tracey Bjorkman, J Patel, Julie Wixey	Perinatal Research Centre	Stem cell treatment for neonatal hypoxic ischaemic encephalopathy	NHMRC	\$318,065	\$954,195 (2018-2020)

2018 Research Publications

Journal Articles:

1. Flint A, **Davies MW**. The use of overnight oximetry in neonates: a literature review. *J Paediatr Child Health* 2018. In press
2. **Paliwoda M**, **New K**, Bogossian F, **Davies M**. Physiological vital sign ranges in newborns from 34 weeks gestation: a systematic review. *Int J Nurs Stud* 2018; 77:81-90
3. Roberts C, Khanna P, Rigby L, Llewellyn A, Gustavs J, Bartle E, Newton L, Newcombe J, **Davies M**, Thistlethwaite J, Lynam J. Utility of selection methods for specialist medical training: A BEME (best evidence medical education) systematic review: BEME guide no. 45. *Medical Teacher* 2018;40(1):3-19
4. **Tshamala D**, **Pelecanos A**, **Davies MW**. Factors associated with infants receiving their mother's own breast milk, on discharge from hospital, in a unit where pasteurised donor human milk is available. *J Paediatr Child Health* 2018. In press
5. Yu T, **Donovan T**, Armfield N, Gole G. The high cost of screening regional and remote infants for Retinopathy of Prematurity. *Clinical and Experimental Ophthalmology* 2018; doi:10.1111/ceo13160
6. **Sharpe J**, Way M, **Koorts PJ**, **Davies MW**. The availability of probiotics and donor human milk is associated with improved survival in very preterm infants. *World J Pediatr* 2018. In press: DOI: 10.1007/s12519-018-0168-0
7. **Hoellering AB**, Tshamala D, **Davies MW**. Study of movement of umbilical venous catheters over time. *J Paediatr Child Health* 2018. In press: doi:10.1111/jpc.14073
8. **Sharpe J**, **Davies MW**. Does earlier arrival of the retrieval team improve short-term outcomes in outborn extremely premature infants? *J Paediatr Child Health* 2018. In press: doi:10.1111/jpc.14064
9. Flint A, **Davies MW**. The use of overnight oximetry in neonates: a literature review. *J Paediatr Child Health* 2018. In press: doi:10.1111/jpc.13935
10. Tshamala D, Pelecanos A, **Davies MW**. Factors associated with infants receiving their mother's own breast milk, on discharge from hospital, in a unit where pasteurised donor human milk is available. *J Paediatr Child Health* 2018. In press: doi:10.1111/jpc.14062
11. Wixey JA, Lee KM, Miller SM, Goasdoue K, **Colditz PB**, Bjorkman ST, Chand KK. Neuropathology in intrauterine growth restricted newborn piglets is associated with glial activation and proinflammatory status in the brain. *J Neuroinflamm*. 2019 In press. DOI: 10.1186/s12974-018-1392-1
12. Kong A, **Lai MM**, Finnigan S, Ware RS, Boyd RN, **Colditz PB**. Background EEG features and prediction of cognitive outcomes in very preterm infants: a systematic review. *Early Hum Dev*. 2018 Dec; 127:74-84. doi: 10.1016/j.earlhumdev.2018.09.015. Epub 2018 Oct 16. Review

Journal Articles: (cont):

13. Winter L, Sanders MR, N Boyd R, Pritchard M, Gray PH, Whittingham K, Forrest K, Webb L, Marquart L, **Colditz PB**. Predicting attendance of a preventative parenting intervention for very preterm infants. *Infant Ment Health J*. 2018 Nov;39(6):699-706. doi: 10.1002/imhj.21749. Epub 2018 Oct 19
14. Al-Theyab NA, **Donovan TJ**, Eiby YA, **Colditz PB**, Lingwood BE. Fat trajectory after birth in very preterm infants mimics healthy term infants. *Pediatr Obes*. 2018 Sep 26. doi: 10.1111/ijpo.12472
15. Popat H, Galea C, Evans N, Lingwood B, **Colditz PB**, Halliday R, Osborn D. Effect of Delayed Cord Clamping on Cerebral Oxygenation in Very Preterm Infants. *Neonatology*. 2018 Sep 10;115(1):13-20. doi: 10.1159/000492712
16. Eiby YA, Shrimpton NY, Wright IMR, Lumbers ER, **Colditz PB**, Duncombe GJ, Lingwood BE. Reduced blood volume decreases cerebral blood flow in preterm piglets. *J Physiol*. 2018 Dec;596(23):6033-6041. doi: 10.1113/JP275583. Epub 2018 Jul 2
17. Pannek K, Fripp J, George JM, Fiori S, **Colditz PB**, Boyd RN, Rose SE. Fixel-based analysis reveals alterations in brain microstructure and macrostructure of preterm-born infants at term equivalent age. *Neuroimage Clin*. 2018 Jan 11; 18:51-59. doi: 10.1016/j.nicl.2018.01.003. eCollection 2018
18. Baboukani PS, Azemi G, Boashash B, **Colditz P**, Omidvarnia A. A novel multivariate phase synchrony measure: application to multichannel newborn EEG analysis. *Digital Signal Processing*. 2018 Jan. 84: 59-68. doi: 10.1016/j.dsp.2018.08.019
19. Wixey JA, Chand KK, Pham L, **Colditz PB**, Bjorkman ST. Therapeutic potential to reduce brain injury in growth restricted newborns. *J Physiol*. 2018 Apr 27. doi: 10.1113/JP275428
20. Winter L, **Colditz PB**, Sanders MR, Boyd RN, Pritchard M, Gray PH, Whittingham K, Forrest K, Leeks R, Webb L, Marquart L, Taylor K, Macey J. Depression, posttraumatic stress and relationship distress in parents of very preterm infants. *Arch Womens Ment Health*. 2018 Mar 3. doi: 10.1007/s00737-018-0821-6
21. George JM, Fiori S, Fripp J, Pannek K, Guzzetta A, David M, Ware RS, Rose SE, **Colditz PB**, Boyd RN. Relationship between very early brain structure and neuromotor, neurological and neurobehavioral function in infants born <31 weeks gestational age. *Early Hum Dev*. 2018 Feb;117:74-82. doi: 10.1016/j.earlhumdev.2017.12.014. Epub 2018 Jan 23.

2018 Conference Presentations – Invited Speaker, Oral and Poster

Oral Presentations:

1. **Deborah Gilmore**. NeoSTRESS. 27th Annual RBWH Healthcare Symposium, Sept 2018
2. **Anndrea Flint**. Overnight Oximetry in Neonates – a Literature Review. ACNN National Conference, August 2018
3. **Donna Hovey**. Transcutaneous Bilirubin Meters – are they safe? ACNN National Conference, August 2018
4. **Jasmine Antoine**. Looks in the mirror and what does she see. Don't Forget the Bubbles Conference. August 2018
5. **Karen Hose**. Green Shoots of Quality Improvement. ANZNN CPI Conference, Sept 2018.

Poster Presentations:

1. **Colette McIntyre**. Moisture blisters, the who, what, when, where, why and how? ANZNN CPI Conference, Sept 2018
2. **Melissa Lai**. Vitamin K Refusal. ANZNN CPI Conference, Sept 2018.

Other Communications and Outputs:

Journal Abstracts:

1. Dawson, P. A., **Colditz**, P. B., Boyd, R. N., Badawi, N., **Koorts, P. J.**, Kumar, S., Flenady, V. J. and Hurriion, E. M. (2018). *Supreme Study: Investigating the Neuroprotective Role of Sulphate Among Preterm Babies*. 22nd Annual Congress of the Perinatal Society of Australia and New Zealand (PSANZ), Auckland, New Zealand, 25–28 March 2018.



Obstetrics and Gynaecology

The Department of Obstetrics and Gynaecology provides tertiary and quaternary obstetrics and gynaecology services for MNHHS and QLD. The departments are involved in multidisciplinary research to ensure the care of the women we treat and manage is contemporary and evidenced based.

The multidisciplinary services include:

- Birthing Services and Birthing Centre
- Antenatal Day Assessment Service
- Obstetric Review Centre
- Maternity Outpatients Service
- Endocrine Service
- Young Parents Program
- General Practitioner Maternity shared care program
- Team midwifery models in conjunction with obstetric care
- Midwifery group practice
- Eligible Private Practice Midwives
- Lactation Service
- Obstetric Medicine Services and Obstetric Telehealth Services
- Maternal Fetal Medicine and Centre for Advanced Prenatal Care
- General Gynaecology
- Colposcopy
- Advanced laparoscopic surgery and endometriosis services
- Gestational trophoblastic disease
- Acute and emergency gynaecological care
- Early pregnancy assessment unit
- Reproductive Endocrinology and Infertility services
- Urogynaecology service
- Paediatric and adolescent gynaecology
- Gynaecology oncology service
- Multidisciplinary BRAC 1 clinic.

Maternity Services collaborate closely with the Perinatal Research Centre, University of QLD and UQCCR for local state and commonwealth grants and multi-centre research projects. The department has been very active in undertaking enhancing its research activities in the area of antenatal care, general obstetrics as well as endometriosis research under the guidance of Dr Akwasi Amoako (Conjoint O & G Specialist UQ and RBWH) and Thangeswaran Rudra. The Maternal Fetal Medicine unit provides a comprehensive and competitive environment for prospective and retrospective research and audits as well as undertaking collaborative research with other centres in Australia and New Zealand. The unit has published extensively in on fibronectin and cervical length in predicting labour, reduced fetal movements, exo. The unit has also collaborated internationally in the STRIDOR trial.

The Paediatric and Adolescent Gynaecology State-wide Service is active in research and presents and publishes internationally. Associate Professor Kimble was an invited keynote speaker in Zurich at the International conference in O & G on reproductive outflow tract disorders in PAG patients. A/P Kimble and her team were also awarded the prize for the oral presentation, "Severe Perineal tear among primiparous women in the early 21st Century:" in the Urogynaecology category at RCOG World Congress. The unit provides outreach services to the Queensland Children's Hospital.

Professor Chris Maher, Urogynaecologist, is involved in international multicentre research and Cochrane reviews aimed at researching the most effective treatments for women with urogynaecological issues to improve patient outcomes. He has published extensively in the area of pelvic organ prolapse and incontinence surgery in women.

Reproductive endocrinology and infertility is a division of the Department of Gynaecology. Professor Hayden Homer is the Christopher Chen Chair in Reproductive Medicine at UQ and has established Queensland's first Oocyte Biology Research Laboratory situated in the UQCCR and Queensland's first human oocyte research program. Professor Homer is the director of the lab, the lead for the newly established "Fertility" research theme at UQCCR and an Associate Editor for the Australian and New Zealand Journal of O&G. His research is funded by 3 CIA NHMRC Grants worth over \$2M. He is also a co-investigator on a unique large-scale genome-wide association study investigating genetic associations with miscarriage awarded funding in 2018 (NHMRC APP1163040). A major aspect of his research seeks to better understand the molecular determinants of oocyte quality and to identify pathways that could be amenable to modification for reversing poor oocyte quality. This knowledge will improve the efficiency of IVF with associated reduction in risks and costs to patients. Another major objective of this research is to develop novel and less invasive approaches for female fertility preservation. Increasing cancer survivorship has increased the numbers of reproductively-aged women who survive their disease and are desirous of pregnancy. The research unit is developing agents that can possibly be administered as a simple pill to increase oocyte resilience to chemotoxicity thereby preserving fertility (termed oncofertility). In 2018, Prof Homer's lab published the highest resolution analyses of chromosome segregation in mammalian oocytes to-date in the highly prestigious journal, Nature Communications, setting his lab apart as the only one in Australia with this capability and one of only a handful in the world.

The Obstetrics and Gynaecology department collaborates with numerous other departments within Metro North Hospital and Health Service (MNHHS) as well as with UQ, UQCCR, Mater Hospital, interstate hospitals and New Zealand.

Supervised Post-Graduate Research Students

Name (<i>RBWH staff in bold</i>)	Current Studies (<i>e.g. PhD, Masters etc.</i>) University (<i>duration</i>)	Research Project Title	Supervisors (<i>RBWH staff in bold</i>)
Goutham Subramanian	PhD, UQ (2016-2019)	Role of DNA damage response proteins in oocyte development	Hayden Homer , Kum Kum Khanna
Jessica Greaney	PhD, UQ (2017-2020)	Asymmetric cell division in mammalian oocytes	Hayden Homer , Carlos Salomon-Gallo
Juvita DeLancy	PhD, UQ (2017-2019)	Sirtuin regulation of oocyte quality in obesity and during ageing	Hayden Homer , Carlos Salomon-Gallo
Sara Pagliarani	PhD, UQ (2018-2020)	Chlamydia infection in the ovary: effects on fertility in female koalas	Chiari Palmieri, Steve Johnston, Hayden Homer
Minh Cao	Honours, UQ (2018) – <i>completed</i> – <i>First Class Honours</i>	Understanding SAC arrest during G2-arrest in mouse oocytes	Hayden Homer , David Simmons
Pia Astbury	Honours, UQ (2017-2018) – <i>completed</i> – <i>First Class Honours</i>	Oxidative stress in human oocytes	Hayden Homer
Nanthini Jayabalan	Master of Science, UQ	Effect of Maternity Obesity and Gestational Diabetes Mellitus (GDM) on the Placental Exosome Trafficking During Gestation	Carlos Soloman-Gallo, Gregory Rice, Gregory Duncombe , Martha Lappas
Rosemary Stoke	PHD, UQ	Maternal, obstetric and perinatal outcomes of pregnancies complicated by socio-demographic medical, surgical or intapartum risk factors	Silesh Kumar , Gregory Duncombe
Grace Boyd	PHD, UQ	Maternal, obstetric and perinatal outcomes of pregnancies complicated by socio-demographic medical, surgical or intapartum risk factors	Silesh Kumar , Gregory Duncombe

2018 Research Positions: Coordinators, Fellow, Adjunct and Honorary Positions

Name	Type of Fellowship	Research Program	University (<i>years</i>)
Hayden Homer	Christopher Chen Chair of Reproductive Medicine	Director of Christopher Chen Oocyte Biology Research Laboratory, UQCCR, Faculty of Medicine	UQ (2016-current)
Rebecca Kimble	Associate Professor	Faculty of Medicine	University of Queensland 2007 – current
Rebecca Kimble	Adjunct Associate Professor	Faculty of Health Sciences	Queensland University of Technology
Karin Lust (2018 research under Obstetric Medicine section)	Associate Professor	Faculty of Medicine	University of Queensland 2014 – current
Akwasi Amoako	Doctor	Faculty of Medicine	University of QLD 2017 – ongoing
Christopher Maher	Professor	Faculty of Medicine	University of QLD 2017 – ongoing
Gregory Duncombe	Associate Professor	Faculty of Medicine	University of Queensland

2018 Current RBWH Research Group / Department Led Research Activity

RBWH Research Group/Department Lead Researchers	Collaborative Researchers	Research Project Title
Thangeswaran Rudra, Akwasi Amoako, Pinar Cingiloglu		Classical Caesarean Section vs Lower Segment Caesarean Section Outcome – 5 years' experience
Thangeswaran Rudra, Priyanka Kosanam		Trend analysis and Outcome Peripartum Hysterectomy for 15 years
Thangeswaran Rudra, Jessica Phillips Yelland	Karin Lust, Penny Wolski. Dayae Lah	Pregnancy outcome following Diabetic Ketoacidosis in Pregnancy for 20 years
Chris Lehner, Renuka Sekar, Akwasi Amoako	Cathy Z Liu, Nicole Ho, Chris Lehner, Renuka Sekar, Akwasi Amoako (RBWH), Anh Nguyen (PA)	The Efficacy of Quantitative Fetal Fibronectin in Predicting Spontaneous Preterm Birth in Symptomatic Women
Chris Lehner, Renuka Sekar, Akwasi Amoako	Cathy Z Liu, Nicole Ho, Chris Lehner, Renuka Sekar, Akwasi Amoako (RBWH), Anh Nguyen (PA)	Role of Fetal Fibronectin and Cervical Length Measurement in Predicting Preterm Labour
Thangeswaran Rudra, Akwasi Amoako	Umesha Pathmanathan, Rachel Wilkinson, Thangeswaran Rudra, Akwasi Amoako	Maternal and Fetal Outcomes in Pregnancies Complicated by Reduced Fetal Movements
Matthew Smith, Yogesh Chadha & Akwasi Amoako	Angela Ng, Janine Farquharson, Matthew Smith, Yogesh Chadha & Akwasi Amoako	Water Versus Land Birth: a 5-Year Retrospective Study of Obstetric and Neonatal Outcomes
Chris Lehner, Renuka Sekar, Akwasi Amoako	Cathy Z Liu, Nicole Ho, Chris Lehner, Renuka Sekar, Akwasi Amoako (RBWH), Anh Nguyen (PA)	Prediction of Time of Delivery Using Cervical Length Measurement in Women with Threatened Preterm Labour
Thangeswaran Rudra, Akwasi Amoako	Pinar Cingiloglu, Thangeswaran Rudra, Akwasi Amoako	Have Rising Classical Caesarean Section Rates Improved the Outcome in Tertiary Centre?
Thangeswaran Rudra, Akwasi Amoako	Pinar Cingiloglu, Thangeswaran Rudra, Akwasi Amoako	A Comparison Between Classical Caesarean Section and Lower Uterine Segment Caesarean Section in Preterm Foetuses: a 10-Year Retrospective Review from a Single Tertiary Obstetric Centre
Akwasi Amoako	Cathy Liu, Mariano Mascarenhas, Oybek Rustamov, Akwasi Amoako	The Impact of Chemotherapy Drugs on The Ovarian Function: a Systematic Review of Specific Agents and Regimens
Akwasi Amoako	Cathy Liu, Mariano Mascarenhas, Oybek Rustamov, Akwasi Amoako	IVF And Ethnicity Systematic Review and Meta-Analysis
Stacey Davie, Akwasi Amoako	Stacey Davie, Akwasi Amoako	Sleep Quality and Endometriosis: a Group Comparison Pilot Study
Philip Chi Kwong Chung, William Song, Thangeswaran Rudra	Philip Chi Kwong Chung, William Song, Thangeswaran Rudra	Outcome following Placenta Previa and Accreta – 10-year review
RMN Kimble	B O'Brien, J Mason	Bleeding Disorders in adolescents with Heavy menstrual bleeding in the Paediatric and adolescent age group; a ten-year cohort Study
RMN Kimble	B O'Brien, B Sutton	MRI concordance with surgical and clinical diagnosis of complex congenital reproductive tract anomalies; a 15-year retrospective cohort study
RMN Kimble	B O'Brien, R Dahiya	Extreme presentations of the HAIR-AN syndrome in the paediatric and adolescent population; a review of literature and case study
RMN Kimble	M Khatun, C Martin, M Findlay, B Farthing	Severe perineal tear among primiparous women in the early 21 st Century: time trend, changing risk factors and clinical practice in maternity care
Keisuke Tanaka, Renuka Sekar, Akram Khalil, David Baartz	Keisuke Tanaka, Elise Coghill, Emma Ballard, Renuka Sekar, Akram Khalil, David Baartz	Management of caesarean scar pregnancy with intravenous methotrexate infusion therapy
Keisuke Tanaka, Akwasi Amoako, Akram Khalil, David Baartz	Keisuke Tanaka, Stephanie Zhu, Akwasi Amoako, Akram Khalil, David Baartz	Management of tubo-ovarian abscess: Single tertiary centre 5-year experience

2018 Collaborative Research Activity involving RBWH Research Group / Department

Collaborative Lead Researchers	RBWH Researchers	Research Project Title
Thangeswaran Rudra, Akwasi Amaoko, Umeha Pathmanathan	Rachel Wilkinson	Reduced Foetal Movements – Outcome following PSANZ Guidelines (Ongoing)
Fatema B Almughlliq, Yong Qin Koh, Hassendrini N Peiris, Kanchan Vaswani, and Murray D Mitchell (QUT)	Renuka Sekar, Akwasi A Amoako, Sailesh Kumar (WNS)	Chronic maternal/fetal inflammation differentially regulates eicosanoid enzyme gene expression in endometrium and trophoblast
Fatema B Almughlliq, Yong Qin Koh, Hassendrini N Peiris, Kanchan Vaswani, and Murray D Mitchell (QUT)	Renuka Sekar, Akwasi A Amoako, Sailesh Kumar (WNS)	Eicosanoid enzyme gene expression profiling in an in vitro co-culture model of maternal-fetal communication
Fatema B Almughlliq, Yong Qin Koh, Hassendrini N Peiris, Kanchan Vaswani, and Murray D Mitchell (QUT)	Renuka Sekar, Akwasi A Amoako, Sailesh Kumar (WNS)	Effect of 2-Arachidonoylglycerol on the production of prostaglandins by human amnion explants
Fatema B Almughlliq, Yong Qin Koh, Hassendrini N Peiris, Kanchan Vaswani, and Murray D Mitchell (QUT)	Renuka Sekar, Akwasi A Amoako, Sailesh Kumar (WNS)	The effect of interleukin 1 β on eicosanoid enzyme gene expression in endometrium and trophoblast cells in a co-culture model
Beckmann, M et al	Baker, K; Kirkman, A; Foxcroft, K	Prostaglandin Inpatient iNduction of labour Compared with BALLOon Outpatient iNduction of labour: a randomised controlled trial HREC Ref: HREC/14/MHS/20
Tarnow-Mordi, W et al (University of Sydney)	Baker, K; Shipton, E; Foxcroft, K	Lactoferrin Evaluation in Anaemia in Pregnancy: LEAP-1 Should we treat iron deficiency anaemia of pregnancy with lactoferrin? A randomised controlled trial HREC/14/HNE/294
Katie Groom	Renuka Sekar/ Pieter Koorts	Childhood Outcomes of STRIDER NZAus: a randomised controlled trial of sildenafil therapy in dismal prognosis early-onset intrauterine growth restriction (New Zealand and Australia)
Jodie Painter (QIMR; CIA), Cecelia Lindgren (Oxford; CIB)	Hayden Homer (CIC)	Large-scale genome-wide analyses to investigate the genetic aetiology of miscarriage (NHMRC funded)

2018 Research Awards and Achievements

Recipient	Award	Event
RMN Kimble	Prize winner Urogynaecology Category “Severe Perineal tear among primiparous women in the early 21 st Century: Time trend, changing risk factors and clinical practice in maternity care”	RCOG World Congress March 2018 Singapore
RMN Kimble	Invited Keynote speaker Reproductive Outflow Tract Disorders in the paediatric and adolescent gynaecology population: Clinical Presentation, Diagnostic Complexities, Imaging, surgical and non-surgical management.”	5 th International Gynaecology and Obstetrics Conference, Zurich, Switzerland October 2018
Karin Lust	MNHHS Staff Excellence Award – Leadership Category	2018 Staff Excellence Awards
Akwasi Amoako	Most Valued Teacher	Royal Brisbane Clinical Unit, University of Queensland Medical School
Akram Khalil	Award for Excellence in Teaching – Clinical Years	University of Queensland Medical Society
Hayden Homer	UQCCR PhD student of the Year 2018	Award to one of Prof Homer’s PhD students
David Baartz	Doctor of the Year Awards	RBWH Consultant of the Year
Keisuke Tanaka	Doctor of the Year Awards	RBWH Registrar of the Year
Amanda Harry	Doctor of the Year Awards	RBWH PHO of the Year
Hayden Homer	UQCCR ECR Paper of the month Award (October 2018)	Awarded for high-impact paper from Prof Homer’s team in Nature Communications

2018 Research Grants – Awarded

Investigators (RBWH staff in bold)	RBWH Research Groups/ Departments	Project Title	Granting Body	Amount in 2018	Total Amount (years)
Jodie Painter (QIMR; CIA), Cecelia Lindgren (Oxford; CIB), Hayden Homer (CIC)	WNS RBWH – Oocyte Biology Research Lab	Large-scale genome-wide analyses to investigate the genetic aetiology of miscarriage	NHMRC APP 1163040	\$97,664	2018-2019 \$195,328
Jessica Greaney and Hayden Homer	WNS RBWH – Oocyte Biology Research Lab	Asymmetric division in mammalian oocytes	Australian Government RTP Scholarship	\$28,000	2018-2019 \$56,000

2018 Research Publications

Journal Articles:

1. Zhe Wei, Jessica Greaney, Chenxi Zhou and **Hayden Homer**. Cdk1 inactivation induces post-anaphase-onset spindle migration and membrane protrusion required for extreme asymmetry in mouse oocytes. *Nature Communications* 2018; 9: 4029
2. Jessica Greaney, Zhe. Wei Z & **Hayden Homer**. Regulation of chromosome segregation in oocytes and the cellular basis for female meiotic errors. *Human Reproduction Update* 2018; 24: 135-161
3. Jessica Greaney, Zhe. Wei Z & **Hayden Homer**. Immunofluorescence Staining of K-Fibers in Mouse Oocytes Using Cold Fixation. *Methods in Molecular Biology* 2018; 1818: 77-87
4. **Hayden Homer**. Modern management of recurrent miscarriage. *Australian and New Zealand Journal of Obstetrics & Gynaecology* 2018 Nov 4. doi.org/10.1111/ajog.12920
5. **Hayden Homer**. Preimplantation genetic testing for aneuploidy (PGT-A): The biology, the technology and the clinical outcomes. *Australian and New Zealand Journal of Obstetrics & Gynaecology* (in Press)
6. **Keisuke Tanaka**, Jackie Chua, Robert Cincotta, Emma Ballard, **Gregory Duncombe**. Hysterosalpingo foam sonography (HyFoSy): Tolerability, safety and the occurrence of pregnancy post-procedure. *Aust N Z J Obstet Gynaecol* 2018; 58(1): 114-118
7. Nair, S., Jayabalan, N., Guanzon, D., Palma, C., Scholz-Romero, K., Elfeky O., Zuñiga, F., Ormazabal, V., Diaz, E., Rice, G.E., **Duncombe, G.**, Jansson, T., McIntyre, H.D., Lappas, M. and Salomon, C. HUMAN PLACENTAL EXOSOMES IN GESTATIONAL DIABETES MELLITUS CARRY A SPECIFIC SET OF miRNAs ASSOCIATED WITH SKELETAL MUSCLE INSULIN SENSITIVITY *Clinical Science* Sep 25, 2018, CS20180487; DOI: <https://doi.org/10.1042/CS20180487>
8. Eiby, Y.A., Shrimpton, N.Y., Wright, I.M.R., Lumbers, E.L., **Colditz, P.B.**, **Duncombe, G.J.** and Lingwood, B.E. REDUCED BLOOD VOLUME DECREASED CEREBRAL BLOOD FLOW IN PRETERM PIGS. *J Physiol* (2018) accepted online <https://doi.org/10.1113/JP275583>
9. Jauniaux, E., Ayres-de-Campos, D. FIGO CONSENSUS GUIDELINES ON PLACENTA ACCRETA SPECTRUM DISORDERS: INTRODUCTION. and for the FIGO Placenta Accreta Diagnosis and Management Expert Consensus Panel (2018), *Int J Gynecol Obstet*, 140: 261–264. doi:10.1002/ijgo.12406
10. Jauniaux, E., Chantraine, F., Silver, R. M., Langhoff-Roos, J. FIGO CONSENSUS GUIDELINES ON PLACENTA ACCRETA SPECTRUM DISORDERS: EPIDEMIOLOGY. and for the FIGO Placenta Accreta Diagnosis and Management Expert Consensus Panel (2018), *Int J Gynecol Obstet*, 140: 265–273. doi:10.1002/ijgo.12407
11. Jauniaux, E., Bhide, A., Kennedy, A., Woodward, P., Hubinont, C., Collins, S. FIGO CONSENSUS GUIDELINES ON PLACENTA ACCRETA SPECTRUM DISORDERS: PRENATAL DIAGNOSIS AND SCREENING. and for the FIGO Placenta Accreta Diagnosis and Management Expert Consensus Panel (2018), *Int J Gynecol Obstet*, 140: 274–280. doi:10.1002/ijgo.12408
12. Allen, L., Jauniaux, E., Hobson, S., Papillon-Smith, J., Belfort, M. A. FIGO CONSENSUS GUIDELINES ON PLACENTA ACCRETA SPECTRUM DISORDERS: NONCONSERVATIVE SURGICAL MANAGEMENT. and for the FIGO Placenta Accreta Diagnosis and Management Expert Consensus Panel (2018), *Int J Gynecol Obstet*, 140: 281–290. doi:10.1002/ijgo.12409
13. Sentilhes, L., Kayem, G., Chandraran, E., Palacios-Jaraquemada, J., Jauniaux, E. FIGO CONSENSUS GUIDELINES ON PLACENTA ACCRETA SPECTRUM DISORDERS: CONSERVATIVE MANAGEMENT, and for the FIGO Placenta Accreta Diagnosis and Management Expert Consensus Panel (2018), *Int J Gynecol Obstet*, 140: 291–298. doi:10.1002/ijgo.12410
14. H Brown, HL Barrett J Lee, JM Pincus, **RM Kimble**, VA Eley; Successful Resuscitation of Maternal Cardiac Arrest with Disseminated Intravascular Coagulation Guided by Rotational Thromboelastometry and Transesophageal Echocardiography: a Case Report. *A&a Practice* 10 (6), 139 2018
15. **O'Brien B**, Mason J, **Kimble R**. Bleeding Disorders in Adolescents with Heavy Menstrual Bleeding: the Queensland Statewide Paediatric and Adolescent Gynaecology Service. *J Pediatr Adolesc Gynecol*. 2018 Nov 22 Full article
16. **B O'Brien**, B Sutton, E Borg, **RMN Kimble**; Use of MRI for diagnosis of congenital vaginal anomalies and concordance with clinical and surgical findings: a study from the Queensland Paediatric and Adolescent Gynaecology Service. *Bjog-An International Journal of Obstetrics and Gynaecology* 125, 135-136 2018
17. **R Kimble**, **B O'Brien**; Management of reproductive outflow track disorders: Classification, varying presentations, diagnostic complexities, appropriate surgical and non-surgical management, and recognition of life threatening situations: extensive experience from a Quaternary Paediatric and Adolescent Gynaecology (PAG) Service in Australia over 15 years. *Bjog-An International Journal of Obstetrics and Gynaecology* 125, 135-135 2018

Journal Articles: (cont):

18. **B O'Brien, R Dahiya, RM Kimble;** HAIR-AN syndrome: An extreme subphenotype of polycystic ovary syndrome. Be aware of the adolescent with extremely high androgen levels and severe hyperinsulinaemia. Queensland Paediatric and Adolescent Gynaecology Service. *Bjog-An International Journal of Obstetrics and Gynaecology* 125, 134-135 2018
19. **B O'Brien, J Mason, RMN Kimble;** Bleeding Disorders in adolescents with heavy menstrual bleeding: a 10 year experience of Queensland Paediatric and Adolescent Gynaecology Service. *BJOG- An International Journal of Obstetrics and Gynaecology* 125,18-18, 2018
20. M Khatun, C Martin, M Findlay, B Farthing, **R Kimble;** Severe perineal tear among primiparous women in the early 21st Century: time trend, changing risk factors and clinical practice in maternity care. *BJOG-AN INTERNATIONAL JOURNAL OF OBSTETRICS AND GYNAECOLOGY.* 125, 21-21 2018
21. Mikhail, S.M., **Maher, C.** 2018 Surgical pathway for the treatment of pelvic organ prolapse. *Obstetrics, Gynaecology and Reproductive Medicine* 28(4), pp. 105-109
22. Mowat, A., **Maher, C.**, Baessler, K., Christmann-Schmid, C., Haya, N., Maher, C. 2018 Surgery for women with posterior compartment prolapse *Cochrane Database of Systematic Reviews* 2018(3)
23. **Maher C.** The way forward after the transvaginal mesh decade. *The Obstetrician & Gynaecologist.* 2018;20(1):7-9
24. Abrams P, Andersson KE, Apostolidis A, Birder L, Bliss D, Brubaker L, et al. 6th International Consultation on Incontinence. Recommendations of the International Scientific Committee: EVALUATION AND TREATMENT OF URINARY INCONTINENCE, PELVIC ORGAN PROLAPSE AND FAECAL INCONTINENCE. *Neurourology and urodynamics.* 2018
25. Baessler K, Christmann-Schmid C, **Maher C,** Haya N, Crawford TJ, Brown J. Surgery for women with pelvic organ prolapse with or without stress urinary incontinence. *The Cochrane database of systematic reviews.* 2018;8: Cd013108
26. Baessler K, **Mowat A, Maher CF.** The minimal important difference of the Australian Pelvic Floor Questionnaire. *International urogynecology journal.* 2018
27. Haya N, Feiner B, Baessler K, Christmann-Schmid C, **Maher C.** Perioperative interventions in pelvic organ prolapse surgery. *The Cochrane database of systematic reviews.* 2018;8: Cd013105
28. **Maher C,** Buttini M. To the Editor. *Menopause (New York, NY).* 2018;25(8):951
29. **Maher CF,** Baessler KK, Barber MD, Cheon C, Consten ECJ, Cooper KG, et al. Summary: 2017 International Consultation on Incontinence Evidence-Based Surgical Pathway for Pelvic Organ Prolapse. *Female pelvic medicine and reconstructive surgery.* 2018
30. **Maher CF,** Baessler KK, Barber MD, Cheong C, Consten ECJ, Cooper KG, et al. Surgical management of pelvic organ prolapse. *Climacteric: The journal of the International Menopause Society.* 2018:1-7
31. Buttini MJ, **Maher C.** The first published randomised controlled trial of laser treatment for vaginal atrophy raises serious questions. *The Medical journal of Australia.* 2018;209(9):376-7
32. **Lehner C, Harry A,** Pelecanos A, Wilson L, Pink K and **Sekar R:** The feasibility of a clinical audit tool to investigate stillbirth in Australia – A single centre experience: *ANZJOG* 2018; 1-7. Doi: 10.1111/ajo.12799.

2018 Conference Presentations – Invited Speaker, Oral and Poster

Invited Speaker:

1. **Hayden Homer.** Invited Keynote Speaker: Dividing with extreme asymmetry. Cell and Developmental Biology Meeting 2018 of the Australian and New Zealand Society for Cell and Developmental Biology (ANZSCDB)
2. **Hayden Homer.** Keynote Speaker at sold-out UQ public lecture series. Preconception and IVF – ensuring the healthiest start to conception. UQ Health Matters Lecture Series 2018: Nature vs. Nurture – how the first 1000 Days affect lifelong health. <https://medicine.uq.edu.au/event/session/9381>
3. **Hayden Homer.** Invited Speaker: Is the PCO oocyte the same as a non-PCO oocyte? MSD SEED (Specialists Sharing Expertise, Education and Data) Meeting 2018: simply the best! What makes a good oocyte and embryo?
4. **Hayden Homer.** Invited Symposium Plenary. Challenges and interventions for improving egg quality. Fertility Society of Australia MSD Symposium 2018: the ovary and oocytes in dialogue: getting enough good eggs
5. **Hayden Homer.** Fertility & ART in the 21st century. Fertility Nurses of Australia Annual Meeting 2018
6. **Prof Hayden Homer,** Christopher Chen Chair in Reproductive Medicine: can new developments in Assisted Reproductive Technology (ART) address current threats to fertility? RBWH Symposium, September 2018
7. **C Lehner,** A Nguyen, C Liu, **A Amoako** and **R Sekar.** Retrospective cohort study evaluating quantitative fetal fibronectin in predicting spontaneous preterm birth in symptomatic women. 27th Annual RBWH Healthcare Symposium. September 2018
8. **RMN Kimble** Invited Keynote speaker 5th International Conference of Obstetrics and Gynaecology, Zurich, Switzerland, 8-10 October "Reproductive Outflow Tract Disorders in the paediatric and adolescent gynaecology population: Clinical Presentation, Diagnostic Complexities, Imaging, surgical and non-surgical management."
9. **RMN Kimble** Invited speaker, RBWH Symposium 2018; Management of Reproductive Track Disorders: Classification, varying presentations, diagnostic complexities, appropriate surgical and non-surgical management, and recognition of life-threatening situations: extensive experience from a Quaternary Paediatric and Adolescent Gynaecology (PAG) Service in Australia over the 15 years
10. Rudra T. Invited Speaker at the 51st Annual Scientific Sessions Sri Lanka College of Obstetricians and Gynaecologists in Colombo Sri Lanka on "Pre- Term Labour Current Concepts". August 2018.

Oral Presentations:

1. **Rebecca Kimble, Brooke O'Brien:** State-wide Paediatric and Adolescent Gynaecology Service – Management and developments in diagnosis of complex congenital reproductive tract – RBWH Symposium September 2018
2. **Keisuke Tanaka, Lars Eriksson, Andreas Obermair.** Incidence of adverse events in gynaecological hospital admissions: a systematic review. Chairman's choice session, Australasian Gynaecological Endoscopy and Surgery (AGES) Annual Scientific Meeting 2018
3. **Brooke O'Brien, J Mason, RMN Kimble:** Prevalence and Management of bleeding disorders in Adolescents presenting with Heavy Menstrual Bleeding. The Queensland Quaternary Paediatric and Adolescent Gynaecology Centre (HREC/17/QRBW/487). RCOG World Congress Singapore March 2018
4. **Rudra T,** Meconium stained Liquor. Golden Jubilee Congress of SLCOG- FIGO- SAFOG, Colombo, Sri Lanka. August 2017
5. **P Cingilogu, T Rudra, A Amoako.** Have rising classical caesarean section rates improved the outcome in a tertiary centre? 27th Annual RBWH Healthcare Symposium. September 2018
6. **Angela Ng, Matthew Smith, Yogesh Chadha & Akwasi Amoako** Water versus land birth: a five-year retrospective cohort study of obstetric and neonatal outcomes at RBWH. 27th Annual RBWH Healthcare Symposium. September 2018
7. **RMN Kimble,** M Khatun Severe perineal tear among primiparous women in the early 21st Century: Time trend, changing risk factors and clinical practice in maternity care. RCOG World Congress, Singapore March 2018 Oral presentation and **prize winner Urogynaecology**
8. **Rudra T** ^{**} Preterm Labour – Current Concepts^{**}. SLCOG Annual Scientific Conference, Colombo, Sri Lanka, Aug18
9. **Dr Christoph Lehner:** Fostering a neglected child; RBWH Symposium, September 2018
10. Jessica Greaney, Zhe Wei & **Hayden Homer.** Asymmetric division in oocytes. European Molecular Biology Laboratory (EMBL) Australia Postgraduate Symposium 2018.

Poster Presentations:

1. **O'Brien, B, Sutton B, Borg E, Kimble RMN.** Use of MRI for diagnosis of Congenital Vaginal Anomalies: a Study from an Australian Quaternary Paediatric and Adolescent Gynaecology Service (HREC/17/QRBW/485). RCOG World Congress Singapore March 2018. Top Scoring Abstract, Poster Category K: Paediatric and Adolescent Gynaecology
2. **Brooke O'Brien, J Mason, RMN Kimble:** Prevalence and Management of bleeding disorders in Adolescents presenting with Heavy Menstrual Bleeding. The Queensland Quaternary Paediatric and Adolescent Gynaecology Centre (HREC/17/QRBW/487). NASPAG Florida April 2018
3. **O'Brien, B, Dihaya R, Kimble RMN.** HAIR-AN Syndrome: an extreme subphenotype of polycystic ovary syndrome. Be aware of the adolescent with extremely high androgen levels and severe hyperinsulinaemia. Queensland Paediatric and Adolescent Gynaecology Service. NASPAG Florida April 2018
4. **O'Brien, B, Dihaya R, Kimble RMN.** HAIR-AN Syndrome: an extreme subphenotype of polycystic ovary syndrome. Be aware of the adolescent with extremely high androgen levels and severe hyperinsulinaemia. Queensland Paediatric and Adolescent Gynaecology Service. RCOG World Congress Singapore March 2018 Top Scoring Abstract, Poster Category K: Paediatric and Adolescent Gynaecology
5. **Kimble RMN, O'Brien B.** Management of Reproductive Track Disorders: Classification, varying presentations, diagnostic complexities, appropriate surgical and non-surgical management, and recognition of life-threatening situations: extensive experience from a Quaternary Paediatric and Adolescent Gynaecology (PAG) Service in Australia over the 15 years. (HREC/17/QRBW/488). RCOG World Congress Singapore March 2018 Top Scoring Abstract, Poster Category K: Paediatric and Adolescent Gynaecology
6. **K Strawson, RMN Kimble** Vaginal disorders in the paediatric and adolescent gynaecology population: a 10-year study from the Queensland Paediatric and Adolescent Gynaecology Service, RCOG World Congress Singapore March 2018
7. **S Davie, Y Hamilton, L Webb and A Amoako.** Sleep Quality and Endometriosis: a Group Comparison Pilot Study. Australian & New Zealand Journal of Obstetrics & Gynaecology 2018; 58 (Suppl. 1): Page 49
8. **G Cham, C Lehner, R Sekar, P Mcgrath and A Amoako.** Non-Invasive Prenatal Testing: An Audit of its Indications and Uptake in a Tertiary Hospital. Australian & New Zealand Journal of Obstetrics & Gynaecology 2018; 58 (Suppl. 1): Page 45 Accepted for poster SOMANZ Annual Scientific Meeting Cairns July 2018 & In: Proceedings of the RBWH (RBWH) Healthcare Symposium; 2018 September 11-13; Brisbane, Australia
9. **C Lehner, A Nguyen, C Liu, A Amoako and R Sekar.** Retrospective Cohort Study Evaluating Quantitative Fetal Fibronectin in Predicting Spontaneous Preterm Birth in Symptomatic Women. Australian & New Zealand Journal of Obstetrics & Gynaecology 2018; 58 (Suppl. 1): Page 62 In: proceedings of the RBWH (RBWH) Healthcare Symposium; 2018 September 11-13; Brisbane, Australia
10. **T Rudra, A Amoako, P Cingilogu** and V Ampornanai. Is Lower Segment Superior to Classical CS for Extreme Prematurity? Australian & New Zealand Journal of Obstetrics & Gynaecology 2018; 58 (Suppl. 1): Page 72
11. **A Harry, K Baker, N Mitchell, K Whitfield** Improving Maternal Morbidity Associated with Postpartum Haemorrhage: Potential Role of Non-Blood Products
12. **Brooke O'Brien, Jane Mason, RMN Kimble:** Prevalence and Management of bleeding disorders in Adolescents presenting with Heavy Menstrual Bleeding. The Queensland Quaternary Paediatric and Adolescent Gynaecology Centre (HREC/17/QRBW/487). Accepted for poster NASPAG Florida April 2018
13. **T Rudra, T Athikari,** Maternal and perinatal outcomes following HELLP syndrome – Australian & New Zealand Journal of Obstetrics & Gynaecology 2018; 58 (Suppl. 1): Page 78
14. **T Rudra, D Lah, J Phillips Yelland, P. Wolloski, K. Lust:** DKP Predictors – SOMANZ Conference – Cairns – July 2018
15. **T Rudra, A. Craven** Renal angioliipoma in pregnancy Case report and review – SOMANZ Conference – Cairns – July 2018
16. **T Rudra, P Cingilogu** Has rising classical caesarean section rate influenced the maternal and perinatal outcome in a tertiary centre? – Presented at the RCOG World Congress – Singapore – March 2018

Poster Presentations (cont):

17. **P. Kosanam, T Rudra** Is Modern Obstetric Practice the cause of rising Peripartum Hystrectomy? – Presented at the RCOG World Congress – Singapore – March 2018
18. **T Rudra** Classical caesarean section in the 21st century – Presented at the RCOG World Congress – Singapore – March 2018
19. **T Rudra, D Lah, J Phillips Yelland, P. Wolski** Diabetic Ketoacidosis in T1DM in pregnancy: a case series? – Presented at the RCOG World Congress – Singapore – March 2018
20. **A Harry, T Rudra** Anaemia Management In Pregnancy: a health service improvement project – presented at the RCOG World Congress – Singapore – March 2018
21. **P Chung, T Rudra** Outcome following Placenta Previa in a Tertiary Centre: presented at the RBWH Symposium – Brisbane – August 2018
22. Green K, **Wolski P** and **Baker K** – Critical Hyponatraemia in the Context of Maternal Mirror Syndrome; Presented SOMANZ Annual Scientific Meeting, July 2018
23. **Cingiloglu P, Thangeswaran R, Amoako, A.** A Comparison between Classical Caesarean Section and Lower Uterine Segment Caesarean Section in Extreme Preterm Fetuses: a 10-year retrospective review from a single tertiary obstetric centre. In: Proceedings of the RBWH (RBWH) Healthcare Symposium; 2018 September 11-13; Brisbane, Australia
24. **Cingiloglu P, Rudra T.** HAVE RISING CLASSICAL CAESAREAN SECTION RATES IMPROVED THE OUTCOME IN A TERTIARY CENTRE? In: Proceedings of the RBWH (RBWH) Healthcare Symposium; 2018 September 11-13; Brisbane, Australia
25. **Asy NG, Smith M, Farquharson J, Chadha Y, David M, Amoako A.** WATER VERSUS LAND BIRTH: A 5-YEAR RETROSPECTIVE COHORT STUDY OF OBSTETRIC AND NEONATAL OUTCOMES AT RBWH. In: proceedings of the RBWH (RBWH) Healthcare Symposium; 2018 September 11-13; Brisbane, Australia
26. **Pathmanaathan U, Wilkinson R, Amoako A, Rudra T.** DECREASED FOETAL MOVEMENTS – IMPACT OF NEW GUIDANCE In: Proceedings of the RBWH (RBWH) Healthcare Symposium; 2018 September 11-13; Brisbane, Australia
27. **O'Brien B, Mason J, Kimble R.** Bleeding disorders in Adolescents with Heavy Menstrual Bleeding. In: Proceedings of the RBWH (RBWH) Healthcare Symposium; 2018 September 11-13; Brisbane, Australia
28. **Eley V, Sekar R, Chin A, Donovan T, Krepska A, Lawrence M, Bell S, McGrath S, Robinson A, Webb L, Marquart L.** Increased maternal abdominal subcutaneous fat thickness and body mass index are associated with increased cesarean delivery: a prospective cohort study. In: proceedings of the RBWH (RBWH) Healthcare Symposium; 2018 September 11-13; Brisbane, Australia.



Obstetric Medicine

The department of Obstetrics medicine conducts research focussed on the health care of women with complex pregnancies. The aim is to improve outcomes for these women and their babies. The department is involved in a number of collaborative research projects including a large NHMRC funded study evaluating the guided treatment of asthma in pregnancy. Other research studies focus on maternal metabolism, in particular breastfeeding in women with type I and type II diabetes, ketones in pregnancy and diabetes and dietetic interventions for pregnant women.

The department has been active in presenting its work at multiple conferences with twelve oral (8 invited) and 22 poster presentations conducted throughout the year. In addition to this, the department has also published 18 journal articles and won two poster prizes at the Annual SOMANZ Scientific Meeting for Best Clinical Poster and Best Scientific Poster.



Supervised Post-Graduate Research Students

Name <i>(RBWH staff in bold)</i>	Current Studies <i>(e.g. PhD, Masters etc.)</i> University <i>(duration)</i>	Research Project Title	Supervisors <i>(RBWH staff in bold)</i>
Angela North	Masters, UQ (2016 – ongoing)	Therapeutic heparin antenatal and peripartum	Karin Lust, Karen Whitfield, Helen Barrett
Naomi Achong	PhD	Breastfeeding in Type 1 Diabetes	Leonie Callaway, Emma Duncan, David McIntyre
Alka Kothari	PhD	Forgotten Fathers	Leonie Callaway, Joel Dulhunty
Helen Robinson	PhD	Ketosis in Pregnancy	Leonie Callaway, Helen Barrett, Marloes Dekker
Fiona Britten	MPhil	Breastfeeding in Type 2 Diabetes	Leonie Callaway, Emma Duncan
Shipton E	PhD	Models of care and breastfeeding	Leonie Callaway, Susan de Jersey, Katie Foxcroft

2018 Research Positions: Coordinators, Fellow, Adjunct and Honorary Positions

Name	Type of Fellowship	Research Program	University (years)
Katie Foxcroft	Adjunct Fellow	WNS and Perinatal Research Centre	University of Qld (2016 – current)
Annelise Kirkham	Research Nurse	WNS and Perinatal Research Centre	
Felicity Stalley	Research Nurse	WNS and Perinatal Research Centre	
Karen Taylor	Research Nurse	WNS and Perinatal Research Centre	
Lisa McKeown	Research Nurse	WNS and Perinatal Research Centre	
Gill Lack	Research Nurse	WNS and Perinatal Research Centre	
Kellie McGrody	Research Nurse	WNS and Perinatal Research Centre	
Kylie Smart	Research Nurse	WNS and Perinatal Research Centre	
Emma Shipton	Research Nurse	WNS and Perinatal Research Centre	
Neroli Mack	Research Nurse	WNS and Perinatal Research Centre	
Bonnie McNeill	Research Nurse	WNS and Perinatal Research Centre	
Linda Cobbald	Research Nurse	WNS and Perinatal Research Centre	

2018 Current RBWH Research Group / Department Led Research Activity

RBWH Research Group/Department Lead Researchers	Collaborative Researchers	Research Project Title
Jeanette Tyler, Katie Foxcroft		Feasibility and acceptability of web-based auditing of hospital staff and maternity patients for compliance with Baby Friendly Health Initiative (BFHI) standards

2018 Collaborative Research Activity involving RBWH Research Group / Department

Collaborative Lead Researchers	RBWH Researchers	Research Project Title
Mike Beckmann	Karen Baker	Prostaglandin Inpatient iNduction of labour Compared with BALLOon Outpatient iNduction of labour: a randomised controlled trial
Vicky Flenady	Yogesh Chada	My Baby's Movements: a stepped wedge cluster randomised controlled trial to raise maternal awareness of fetal movements during pregnancy
Katie Groom	Renuka Sekar/ Pieter Koorts	Childhood Outcomes of STRIDER NZAus: a randomised controlled trial of sildenafil therapy in dismal prognosis early-onset intrauterine growth restriction (New Zealand and Australia)
Murphy V, Gibson P, Hensley M, Mattes J, Giles W, Peek M, Bisits A, McCaffery K	Callaway L, Colditz P, Barrett H	Breathing for Life Trial
EURObservational research programme	Lust K, Parsonage W	Registry of pregnancy and cardiac disease
Sullivan E, Cordina R, Simmons L, Pollock W, Kennedy D, Vaughan G, Li Z, O'Brien A, Turnbull K, Peek M, Celermajer D, Parsonage W, Lam L, Zentner D, Hyett J, Clarke M	Lust K, Parsonage W	NSW longitudinal study of first-time mothers with heart disease and their babies
Regan AK, Andrews RM, Moore HC, Binks MJ, McHugh L, Pereira G, Blyth CC, Van Buynder PG,	Lust K	Links2HealthierBubs: influenza and pertussis vaccine effectiveness in pregnancy

2018 Research Awards and Achievements

Recipient	Award	Event
Madeline Duke	Poster Prize for Best Clinical Poster	SOMANZ Annual Scientific Meeting Cairns July 2018
Kate Poulsen	Poster Prize for Best Scientific Poster	SOMANZ Annual Scientific Meeting Cairns July 2018

2018 Research Grants – Awarded

Investigators (<i>RBWH staff in bold</i>)	RBWH Research Groups/ Departments	Project Title	Granting Body	Amount in 2018	Total Amount (years)
Simmons D, Callaway L , Dekker M, Ng D	Obstetric medicine	Trophoblast cell-cell fusion in preeclampsia	National Health and Medical Research Council	\$162,424.33	\$487,273 (2017-2019)
Murphy V, Gibson P, Hensley M, Mattes J, Giles W, Peek M, Bisits A, Callaway L , McCaffery K, Barrett H	Obstetric medicine	The Breathing for Life Trial (BLT): a randomized trial of fractional exhaled nitric oxide based management of asthma during pregnancy and its impact on perinatal outcomes and infant and childhood respiratory health	National Health and Medical Research Council	\$28,500	\$1,647,906 (2014-2018)
Graves N, Hillman K, Willmott L, White B, Harvey G, Callaway L , Cardona-Morrell M, Barnett A, Lee X	Obstetric Medicine	Reducing Non-Beneficial Treatment at the End-of-Life	NHMRC Partnership Project	\$504,107.50	\$1,008,215 (2018-2020)
Hague W, Dodd J, Morris J, Stark M, Peek M, Middleton P, Shand A, Newnham J, Callaway L , Walker S	Obstetric Medicine	Treatment of Severe Early Onset Intrahepatic Cholestasis of Pregnancy	MRFF – Research Grant	\$595,884.50	\$1,191,769 (2018-2020)
Shipton E	Obstetric Medicine	PhD models of care and Breastfeeding	RBWH Foundation	\$38082.52	\$3808.52 (2018)
Sullivan E, Cordina R, Simmons L, Pollock W, Lust K , Parsonage W , Kennedy D, Vaughan G, Li Z, O'Brien A, Turnbull K, Peek M, Celermajer D, Lam L, Zentner D, Hyett J, Clarke M	Obstetric Medicine	NSW longitudinal study of first-time mothers with heart disease and their babies	Heart Foundation – NSW CVRN Women and Heart Disease Grant	\$75 000	\$150 000 (2017-2018)
Regan AK, Andrews RM, Moore HC, Binks MJ, McHugh L, Pereira G, Blyth CC, Van Buynder PG, Lust K	Obstetric Medicine	Links2HealthierBubs: influenza and pertussis vaccine effectiveness in pregnancy	National Health and Medical Research Council Grant	\$16,9083.30	\$676 333.20 (2017-2020)

2018 Research Publications

Journal Articles

- Achong N, Duncan EL, McIntyre HD, **Callaway L**. The physiological and glycaemic changes in breastfeeding women with type 1 diabetes mellitus. *Diabetes Res Clin Pract.* 2018. Jan 135; 93-101
- Kilgour C, Bogossian FE, **Callaway L**, Gallois C. Postnatal gestational diabetes mellitus follow-up: perspectives of Australian hospital clinicians and general practitioners. *Women Birth.* 2018. May 4
- Robin AL, Jensen ME, Gibson PG, Powell H, Giles WB, Clifton VL, Mattes J, Peek MJ, **Barrett HL**, Seeho SK, **Callaway LK**, Abbott A, Attia J, Wark PA, Murphy VE. Trends in asthma self-management skills and inhaled corticosteroid use during pregnancy and postpartum from 2004-2017. *J Asthma.* 2018 May 2:1-22
- Ellwood DA, **Callaway LK**. Maternal overweight and obesity: where to from here? *Med J Aust.* 2018-19; 208(3)
- Callaway L**, **Eley V**. Obesity and Complications from Neuraxial Analgesia – We Need to Know More. *Paediatr Perinat Epidemiol.* 2017. Nov 31 (6): 506-508
- Barrett HL**, Gomez-Arango LF, Wilkinson SA, McIntyre HD, **Callaway LK**, Morrison M, Dekker Nitert M. A Vegetarian Diet Is a Major Determinant of Gut Microbiota Composition in Early Pregnancy. *Nutrients.* 2018 Jul 12;10(7). pii: E890. doi: 10.3390/nu10070890
- Robinson HL**, **Barrett HL**, **Foxcroft K**, **Callaway LK**, Dekker Nitert M: prevalence of maternal urinary ketones in pregnancy in overweight and obese women. *Obstet Med.* 2018 Jun;11(2):79-82. doi: 10.1177/1753495X17743163. Epub 2017 Dec 5

Journal Articles (cont):

8. **Eley VA**, Christensen R, Kumar S, **Callaway LK**: a review of blood pressure measurement in obese pregnant women. *Int J Obstet Anesth*. 2018 Apr 22. pii: S0959-289X (17)30461-2. doi: 10.1016/j.ijoa.2018.04.004. [Epub ahead of print] Review
9. Dekker Nitert M, Gomez-Arango LF, **Barrett HL**, McIntyre HD, Anderson GJ, Frazer DM, **Callaway LK**: iron supplementation has minor effects on gut microbiota composition in overweight and obese women in early pregnancy. *Br J Nutr*. 2018 May 23:1-7. doi: 10.1017/S0007114518001149. [Epub ahead of print]
10. Robijn AL, Jensen ME, Gibson PG, Powell H, Giles WB, Clifton VL, Mattes J, Peek MJ, **Barrett HL**, Seeho SK, **Callaway LK**, Abbott A, Attia J, Wark PA, Murphy VE. J: Trends in asthma self-management skills and inhaled corticosteroid use during pregnancy and postpartum from 2004 to 2017. *Asthma*. 2018 May 2:1-9. doi: 10.1080/02770903.2018.1471709
11. Rigg, J, Gilbertson E, **Britten F, Barrett H, Lust K**; Primary Hyperparathyroidism in Pregnancy 2000-2015 at RBWH' JCEM
12. Holland OJ, Cuffe JSM, Dekker Nitert M, **Callaway L**, Kwan Cheung KA, Radenkovic F, Perkins AV: Placental mitochondrial adaptations in preeclampsia associated with progression to term delivery. *Cell Death Dis*. 2018 Nov 19;9(12):1150. doi: 10.1038/s41419-018-1190-9
13. Schroder WA, Le TT, Gardner J, Andrews RK, Gardiner EE, **Callaway L**, Suhrbier A.: SerpinB2 deficiency in mice reduces bleeding times via dysregulated platelet activation. *Platelets*. 2018 Nov 2:1-6. doi: 10.1080/09537104.2018.1535702. [Epub ahead of print]
14. Schoenaker DAJM, Vergouwe Y, Soedamah-Muthu SS, **Callaway LK**, Mishra GD: preconception risk of gestational diabetes: Development of a prediction model in nulliparous Australian women. *Diabetes Res Clin Pract*. 2018 Oct 5; 146:48-57. doi: 10.1016/j.diabres.2018.09.021. [Epub ahead of print]
15. Mamun AA, McIntyre DH, Najman JM, Williams GM, Khatun M, Finlay J, **Callaway L.**: young adult pregnancy status and the risk of developing overweight and obesity among women and men. *Clin Obes*. 2018 Oct;8(5):327-336. doi: 10.1111/cob.12262. Epub 2018 Jul 25
16. Kilgour C, Bogossian FE, **Callaway L**, Gallois C.: postnatal gestational diabetes mellitus follow-up: perspectives of Australian hospital clinicians and general practitioners. *Women Birth*. 2018 May 4. pii: S1871-5192(17)30641-8. doi: 10.1016/j.wombi.2018.04.011. [Epub ahead of print]
17. Dawson AJ, Krastev Y, Parsonage WA, Peek M **Lust KM**, Sullivan EA. Experiences of women with cardiac disease in pregnancy: a systematic review and metasynthesis. *BMJ Open* 2018;8:e022755. doi:10.1136/bmjopen-2018-022755
18. Angela M. North, BSc, BPharm, MPhil Candidate MPS AACPA1, **Helen L. Barrett**, BSc MBBS FRACP PhD2,3, **Karin M. Lust**, MBBS FRACP2,3, **Karen M. Whitfield**, BSc (Hons): Therapeutic heparin during the peripartum period – challenges associated with safe use. *Journal of Pharmacy Practice and Research* (2017). doi: 10.1002/jppr.1399.

2018 Conference Presentations – Invited Speaker, Oral and Poster

Invited Speaker:

1. **Helen Robinson**: Low-value interventions in obstetric medicine; Invited oral SOMANZ Cairns July 2018
2. Prof Shaun Brennecke, Dr David Williams, **Prof Leonie Callaway**, Prof Annemarie Hennessy, Prof Michael Peek: debate on first trimester screening for preeclampsia. Invited oral talk SOMANZ Cairns July 2018
3. **Dr Karin Lust**, Dr Samantha Scherman, Dr James Sartain, A/Prof Leeanne Grigg, A/Prof Dorothy Radford: interactive case discussion including cardiology and stroke. Invited panellist SOMANZ Cairns July 2018
4. Sandra Lowe, Amanda Beech, Lucy Bowyer, Catherine Marnoch, **Helen Robinson**: Development of the SOMANZ Guideline for management of nausea and Vomiting in Pregnancy and Hyperemesis Garvidarum. Invited oral talk SOMANZ Cairns July 2018
5. **Helen Robinson**, Irena Idel, Karin Lust, Catherine Marnoch, Mark Morton, Joanne Siad, Jason Soon: low-value interventions in obstetric medicine. Invited oral talk SOMANZ Cairns July 2018
6. **Karin Lust**, Timing and control managing gestational diabetes, Medicines Management 2018 44th SHPA National Conference, Brisbane 24 Nov 2018
7. **Karin Lust**, Pregnancy and heart failure, Statewide Heart failure services course, Managing heart failure from hospital to home RBWH 31 August 2018
8. **Karin Lust**, Helen Barrett, **Kellie Tathem**, Obstetric Medicine Speaker & Chair, RANZCOG, Pre-examination Course, Brisbane May 2018.

Oral Presentations:

1. **Matthew Bright, Gunjan Chawla, Leonie Callaway, Victoria Eley**: Maternal and fetal outcomes in super-obese women. Accepted for oral talk RCOG March 2018
2. **Matthew Bright, Gunjan Chawla, Leonie Callaway, Victoria Eley**: Maternal and fetal outcomes in super-obese women. Accepted for oral talk RCOG March 2018
3. Bond, S, Young, L, **Poulsen, K**, Barrett, H, Taylor, A and Barrett, C. Vaccination decisions and incidence of neonatal infections in mothers exposed to biological DMARDs during pregnancy. Oral abstract (New Investigator Free Papers) presented (by Bond, S) at Australian Rheumatology Association (ARA) 58th Annual Scientific Meeting, Melbourne, 2018 May
4. **Thomas Basso, Christopher Lehner, Annabelle Lamprecht, Karin Lust, William Parsonage**, Harris Haqqani, **Renuka Sekar**: Nadolol use in pregnancy and Small for Gestational Age (SGA) newborns at term: a case series. Accepted for oral talk SOMANZ Cairns July 2018.

Poster Presentations:

1. **Michelle Cole, Leonie Callaway, Ann-Maree Craven, Karin Lust, Penny Wolski**, Amanda Beech: Hyperemesis Gravidarum and association with Helicobacter Pylori. Accepted for poster SOMANZ Annual Scientific Meeting Cairns July 2018
2. **Michelle Cole, Penny Wolski, Leonie Callaway**, Amanda Beech, **Ann-Maree Craven**: Case Report of Cyclosporin Levels in Breast Milk. Accepted for poster SOMANZ Annual Scientific Meeting Cairns July 2018
3. **Ann-Maree Craven**: Tacrolimus nephrotoxicity imitating pre-eclampsia – a case series. Accepted for poster SOMANZ Annual Scientific Meeting Cairns July 2018
4. Karmen Lim, **Penny Wolski, Renuka Sekar, Ann-Maree Craven**: NSAID-Induced acute kidney injury in the post-partum period – a case series. Accepted for poster SOMANZ Annual Scientific Meeting Cairns July 2018
5. Juliana C Ding, **Karin Lust**: Live Pregnancy in a heart, Lung, and Liver transplant patient: a case report. Accepted for poster SOMANZ Annual Scientific Meeting Cairns July 2018
6. **Madeline Duke, Helen Barrett**, Carel Pretorius, **Fiona Britten, Peter Donovan**: Maternal metyrapone use during breastfeeding: safe for the breastfed infant. Accepted for poster SOMANZ Annual Scientific Meeting Cairns July 2018
7. **Madeline Duke, Leonie Callaway**, Caroline Tallis: steroid refractory acute cellular rejection of a liver transplant in pregnancy: a case report. Accepted for poster SOMANZ Annual Scientific Meeting Cairns July 2018
8. **Dr Thangeswaran Rudra, Dr Jessica Philips-Yelland, Dr Dayae Lah, Dr Penny Wolski, A/Prof Karin Lust**: has modern management of DKP improved the outcome? Accepted for poster SOMANZ Annual Scientific Meeting Cairns July 2018
9. **Fallon Noon, Fiona Britten**: Heparin induced liver failure in pregnancy: a case report. Accepted for poster SOMANZ Annual Scientific Meeting Cairns July 2018
10. Stephanie Bond, Laurel Young, **Katherine Poulsen, Helen Barrett**, Andrew L Taylor, Claire Barrett: Vaccination Decisions and Incidence of Serious Neonatal Infections in Mothers Exposed to Biologicals and Targeted Synthetic Drugs During Pregnancy. Accepted for poster SOMANZ Annual Scientific Meeting Cairns July 2018
11. **Dr Thangeswaran Rudra, Anne-Maree Crave**: Real angioliopoma in pregnancy – case report and review. Accepted for poster SOMANZ Annual Scientific Meeting Cairns July 2018
12. **Archee Singh, Leonie Callaway, Penny Wolski**: Intracranial meningioma in pregnancy presenting with Visual Field Defects. Accepted for poster SOMANZ Annual Scientific Meeting Cairns July 2018
13. **Archee Singh, Leonie Callaway, Penny wolski**, Fiona Britten, Winifred Lee: An Itch You Can't Scratch. Accepted for poster SOMANZ Annual Scientific Meeting Cairns July 2018
14. **Keeri Young, Michael d'Emden, Katherine Poulsen, Penny Wolski, Annabelle Lamprecht, Michelle Cole**: morbid insulin resistance in a pregnant patient with Type 1 Diabetes mellitus (T1DM). Accepted for poster SOMANZ Annual Scientific Meeting Cairns July 2018
15. North A, **Barrett H, Lust K and Whitfield K**. Therapeutic anticoagulation during the postnatal peripartum period: a survey of clinical practice. In: Proceedings of the RBWH (RBWH) Healthcare Symposium; 2018 September 11-13; Brisbane, Australia
16. North A, **Barrett H, Lust K and Whitfield K**. Therapeutic anticoagulation during the postnatal peripartum period: a survey of clinical practice. In: proceedings of The Society of Hospital Pharmacists of Australia (SHPA) National Conference. 2018 22-25 November; Brisbane, Australia
17. **Dr Matthew Bright, Dr Gunjan Chawla, Prof Leonie Callaway**, Assoc Prof Victoria Eley. Maternal and fetal outcomes in super-obese women. In: Proceedings of the RBWH (RBWH) Healthcare Symposium; 2018 September 11-13; Brisbane, Australia
18. Faisal Altemani, **Helen L. Barrett**, Luisa Gomez-Arango, H. David McIntyre, **Leonie K. Callaway**, Marloes Dekker Nitert. Women who develop preeclampsia have lower abundance of the butyrate-producer Coprococcus in their gut microbiota. In: proceedings of the RBWH (RBWH) Healthcare Symposium; 2018 September 11-13; Brisbane, Australia
19. **Duke M, Britten F**, Pretorius C J, McWhinney B C, Ungerer J, **Barrett H**, Donovan P. Maternal metyrapone use during breastfeeding: Safe for the breastfed infant. . In: Proceedings of the RBWH (RBWH) Healthcare Symposium; 2018 September 11-13; Brisbane, Australia
20. **Keeri Young, Kate Poulsen, Michael d'Emden, Penny Wolski, Fiona Britten, Michelle Cole, Annabelle Lamprecht**. Morbid subcutaneous Insulin Resistance in a Pregnant Patient with Type 1 Diabetes Mellitus. In: Proceedings of the RBWH (RBWH) Healthcare Symposium; 2018 September 11-13; Brisbane, Australia
21. **Madeline Duke**, Caroline Tallis **Leonie Callaway**. Steroid refractory acute cellular rejection of a liver transplant in pregnancy: a case report. In: Proceedings of the RBWH (RBWH) Healthcare Symposium; 2018 September 11-13; Brisbane, Australia
22. **Thomas Basso, Dr Christoph Lehner, Dr Annabelle Lamprecht, A/Professor Karin Lust, Professor William Parsonage, A/Professor Haris Haqqani, Dr Renuka Sekar**. Nadolol use in pregnancy and Small for Gestational Age (SGA) newborns at term: a case series. In: Proceedings of the RBWH (RBWH) Healthcare Symposium; 2018 September 11-13; Brisbane, Australia.

Other Communications and Outputs:

Abstracts

Schoenaker DA, Mishra G, **Callaway L**. Women with childhood trauma who develop depression prior to pregnancy are at increased risk of developing gestational diabetes. ADIPS Annual Scientific Meeting, Adelaide, August 2018

Duke M, Callaway L. Complex Case Presentation – Preconception Care in a Woman Following Pancreas/Kidney Transplant. ADIPS Annual Scientific Meeting, Adelaide, August 2018.

Perinatal Research Centre

The Perinatal Research Centre (PRC), directed by Professor Paul Colditz, is committed to improving health for mothers and babies through world class biomedical and clinical research. Our multidisciplinary research team, consisting of clinicians, scientists, allied health professionals and engineers, aims to discover and translate research advances into clinical practice and better health outcomes for mothers and babies. Research within the PRC covers several related areas including neonatal brain injury and neuroprotection led by Dr Tracey Bjorkman, systems physiology led by Dr Barbara Lingwood and Dr Yvonne Eiby, signal processing led by Prof Boualem Boashash as well as clinical trials involving the Royal Brisbane and Women's Hospital.

With the support of our national and international collaborators we achieved much towards our goals in 2018. We were pleased to be awarded research grants in 2018 from RBWH Foundation, Financial Markets Foundation for Children and two NHMRC project grants. Prof Colditz' NHMRC study will examine placental stem cell treatment to protect babies' brains. This novel project uses the baby's own placenta to source the stem cells. The use of human cells has the merit of being immediately relevant to translate to clinical trials. Dr Wixey's NHMRC project will study the role of inflammation and brain injury in the growth restricted baby. Growth restriction during pregnancy can damage the baby's brain and result in poor outcomes. This study will examine whether a readily available and safe anti-inflammatory treatment can reduce brain injury following intrauterine growth restriction.

Professor Paul Colditz continues to lead a \$1.65 million NHMRC grant over 5 years to predict neurodevelopmental disability in babies born very preterm. By identifying structural and functional brain connectivity features earlier and more accurately than currently possible in the preterm brain, this research will enable better prediction of longer-term motor and neurodevelopmental function. This will lay the groundwork for new interventions to prevent or effectively treat brain injury.

Dr Tracey Bjorkman continues her NHMRC project to evaluate a novel therapy for neonatal seizures. The growth of the neonatal brain injury team has led to a number of significant publications and conference presentations in 2018. Dr Barbara Lingwood and Dr Yvonne Eiby also continue their 2017 NHMRC project examining whether early blood transfusion is more effective than saline to improve cerebral oxygen delivery in very preterm neonates.

The RBWH NICU will contribute to a new multicentre Phase III randomised controlled trial funded by NHMRC to determine whether Erythropoietin treatment can prevent adverse outcomes in babies with HIE. Other ongoing clinical trials which utilise state-of-the-art methods and techniques include predicting motor outcomes in preterm babies using MRI, optimising adaptation of the cardiovascular system to extrauterine life in the very preterm baby, and determining the effects of different feeding regimens on development in preterm babies.

The Joie De Vie RBWHF Butterfly Ball, held at the Hilton, was a great success and enjoyed by many. We would like to thank RBWH Foundation, Lions Medical Research Foundation, and so many members of the public for their generous support which is vital to improving outcomes for mothers and babies through research.

Supervised Post-Graduate Research Students

Name <i>(RBWH staff in bold)</i>	Current Studies <i>(e.g. PhD, Masters etc.)</i> University <i>(duration)</i>	Research Project Title	Supervisors <i>(RBWH staff in bold)</i>
MD Abdul Awal	PhD, UQ – Awarded 2018	Classification and localization of neonatal EEG abnormalities using time-frequency image processing based neural network and support vector machine	Paul Colditz , Boualem Boashash
Ms Nada Al-Theyab	PhD, UQ – Awarded 2018	Preterm infant body composition	Barbara Lingwood, Timothy Donovan , Paul Colditz
Ms Rebecca Caesar	PhD, UQ (2012-2018)	Early predictors for neurodevelopmental outcome and prioritisation of service delivery for at risk premature infants	Roslyn Boyd, Paul Colditz
Mr Matthew Fielder	MPhil, UQ (2014-2018)	Novel therapies for seizures following hypoxic-ischaemic injury in neonates	Stella Tracey Bjorkman, Paul Colditz
Ms Elizabeth Forbes	MPhil, UQ (2013-2018)	Changes in cardiac structure and biochemistry during transition to extra uterine life in preterm and term piglets	Yvonne Eiby, Barbara Lingwood, Karen Moritz
Ms Kate Goasdoue	PhD, UQ (2015-2018)	A novel therapy for neonatal seizures	Stella Tracey Bjorkman, Julie Wixey
Dr Luke Jardine	PhD, UQ (2015-2018)	Development of early predictors of long term neurodevelopmental outcome for preterm infants	Paul Colditz , Mark Davies
Ms Ji Yeon Kim	PhD, UQ (2015-2018)	Understanding how remote application of near infrared light induces neuroprotection	Paul Colditz , Jonathon Stone

Supervised Post-Graduate Research Students (cont)

Name (RBWH staff in bold)	Current Studies (e.g. PhD, Masters etc.) University (duration)	Research Project Title	Supervisors (RBWH staff in bold)
Ms Annice Kong	PhD, UQ – Awarded 2018	The relationship between brain structure assessed using diffusion MRI and function assessed using dense array EEG of very preterm infants and the ability to predict neurodevelopmental outcomes	Paul Colditz , Simon Finnigan, Roslyn Boyd, Stephen Rose
Dr Melissa Lai	PhD, UQ (2015-2018)	Environmental manipulation of the very preterm infant: can dense array EEG detect developmental differences at term equivalent age	Paul Colditz , Simon Finnigan, Jurgen Fripp
Dr Norman Ma	MPhil, UQ (2011-2018)	Brain injury severity in a neonatal model of hypoxic ischemia following potential neuroprotective interventions	Stella Tracey Bjorkman, Craig Winter, Paul Colditz
Ms Stephanie Miller	PhD, UQ – Awarded 2018	Examining the maturation of the GABA system in the neonatal brain and its role in hypoxic-ischaemic brain injury	Stella Tracey Bjorkman, Peter Noakes
Mr James Morong	MPhil, UQ – Awarded 2018	A comparative study of in-hospital maternal mortality ratio (MMR) between the United States of America and Australia	Paul Colditz , Alfred Robichaux
Ms Abirami Ratnasingham	PhD, UQ (2016-2019)	Long term consequences of altered neonatal adiposity	Barbara Lingwood, Timothy Donovan , Marloes Nitert Dekker, Peter Davies
Ms Sonia Sam	PhD, UQ (2011-2018)	Cardiovascular factors associated with poor outcome in preterm infants	Barbara Lingwood, Paul Colditz
Mr Timothy Sherry	PhD, UQ (2015-2018)	Identification of brain events via electroencephalogram EEG through blind source separation	Paul Colditz
Dr Karen Barlow	PhD, UQ (2017-2020)	Melatonin in improving outcome after acquired brain injury	Ros Boyd, Paul Colditz
Mr Caleb Stewart	MPhil, UQ (2017-2019)	Modelling the impact of preterm birth on neurodevelopmental trajectories via neonatal MRI maturation index	Paul Colditz , Kerstin Pannek
Mr Elliot Teo	PhD, UQ (2017-2020)	Novel adjunctive therapies for the treatment of neonatal hypoxic-ischemic encephalopathy	Tracey Bjorkman, Paul Colditz
Ms Lara Jones	PhD, UQ (2018-2021)	Effect of placental stem cells on the blood brain barrier in a model of hypoxic-ischemic encephalopathy	Paul Colditz , Tracey Bjorkman

2018 Research Positions: Coordinators, Fellow, Adjunct and Honorary Positions

Name	Type of Fellowship	Research Program	University (years)
Paul Colditz	Professor of Perinatal Medicine	Clinical neonatology, neuroscience, biomedical signal processing	University of Queensland (current)
Tracey Bjorkman	Lions Senior Medical Research Fellow	Hypoxic-ischemic brain injury and seizures in the neonate	University of Queensland (current)
Nigel Barnett	Honorary Senior Fellow	The effects of hypoxia/ischaemia in visual development and disease	University of Queensland (current)
Boualem Boashash	Professor	Time-frequency signal analysis, biomedical signal processing, spectral estimation, signal detection and classification	University of Queensland (current)
Kirat Chand	Research Officer	Hypoxic-ischaemic brain injury, growth restriction, inflammation and seizures in the neonate	University of Queensland (current)
Timothy Donovan	Associate Professor	Improving outcomes for preterm infants particularly in the area of nutrition, growth/ body composition and development. Ongoing research in the use of telemedicine to provide outreach care of sick infants in regional hospitals. Epidemiology of gastroschisis	University of Queensland (current)
Yvonne Eiby	Research Fellow	The cardiovascular system of preterm infants	University of Queensland (current)
Christine East	Honorary Professor	Fetal monitoring	Monash University (current)
Simon Finnigan	Senior Research Fellow	Brain monitoring techniques to improve outcomes for critically ill patients (e.g. extremely premature babies; stroke patients)	University of Queensland (current)

2018 Research Positions: Coordinators, Fellow, Adjunct and Honorary Positions (cont)

Name	Type of Fellowship	Research Program	University (years)
Katie Foxcroft	Adjunct Fellow	Clinical Trial Coordinator	University of Queensland (current)
Janet Hammill	Honorary Senior Fellow	Collaboration for Alcohol Related Developmental Disorders	University of Queensland (current)
Annelise Kirkham	Research Nurse	Clinical Trials	University of Queensland (current)
Aven Lee	Postdoctoral Research Fellow	Molecular biology and protein biology of the brain	University of Queensland (current)
Melissa Lai	Senior Lecturer	EEG in preterm babies	University of Queensland (current)
Gillian Lack	Research Nurse	Clinical Trials	University of Queensland (current)
Barbara Lingwood	Senior Research Fellow	Cardiovascular function in the preterm infant, infant body composition	University of Queensland (current)
Penny Love	Honorary Fellow	Preterm massage study	University of Queensland (current)
John Luff	Senior Research Assistant	Neuroprotective strategies for the newborn	University of Queensland (current)
Eugene Lumbers	Honorary Professor	Fetal origins of adult diseases, hypertension, development of control of the circulation, exercise and training, and renal development and function	University of Newcastle (current)
Kellie McGroary	Research Nurse	Clinical Trials	University of Queensland (current)
Lipsa Mohanty	Senior Research Technician	Neuroprotective strategies for the newborn	University of Queensland (current)
Randal Moldrich	Honorary Fellow	Preterm brain outcomes	University of Queensland (current)
Lisa McKeown	Research Nurse	Clinical Trials	University of Queensland (current)
Stephanie Miller	Research Officer	Hypoxic-ischaemic brain injury and seizures in the neonate	University of Queensland (current)
Kym Morris	Research Assistant	Clinical Trials	University of Queensland (current)
Margo Pritchard	Honorary Senior Fellow	Child health surveillance and intervention	Australian Catholic University (current)
Stephen Rose	Honorary Professor	Development and application of advanced MRI techniques to aid the detection and monitoring of disease processes	University of Queensland (current)
Kylie Smart	Research Nurse	Clinical Trials	University of Queensland (current)
Karen Taylor	Research Nurse	Clinical Trials Group supporting: Enhanced parenting to improve developmental outcomes in preterm infants	University of Queensland (current)
Leanne Winter	Project Coordinator	Prem Baby Triple P	University of Queensland (current)
Julie Wixey	Research Fellow	Hypoxic-ischaemic brain injury, intrauterine growth restriction and inflammation in the neonatal brain	University of Queensland (current)

2018 Current RBWH Research Group / Department Led Research Activity

RBWH Research Group/Department Lead Researchers	Collaborative Researchers	Research Project Title
Paul Colditz	Tracey Bjorkman, Julie Wixey	Inflammation in the growth restricted newborn
Paul Colditz	Barbara Lingwood, Tracey Bjorkman, Julie Wixey, Paul Dawson, Roslyn Boyd, Yvonne Eiby	A pre-clinical intensive care facility to research long-term outcomes in neonates
Paul Colditz	Wixey J, Lai M, Bjorkman ST	Stem cell treatment to protect the growth restricted newborn brain
Mel Lai	Bjorkman ST, Wixey J, Colditz P	CO2 gas as an adjunctive neuroprotective therapy for hypoxic-ischemic encephalopathy (HIE)
Paul Colditz	Khosrotehrani K, Julie Wixey	Improving brain outcomes in the growth restricted newborn using placental stem cell treatment
Paul Colditz	Khosrotehrani K, Bjorkman T, Patel J, Wixey J	Stem cell treatment for neonatal hypoxic ischemic encephalopathy

2018 Current RBWH Research Group / Department Led Research Activity (cont)

RBWH Research Group/Department Lead Researchers	Collaborative Researchers	Research Project Title
Paul Colditz	Kiarash Khosrotehrani	Stem cell treatment for neonatal brain injury
Paul Colditz	Julie Wixey, Stella T Bjorkman	Reducing inflammation in growth restricted newborn brains
Paul Colditz	Kiarash Khosrotehrani, Stella T Bjorkman, Nick Fisk, Barbara Lingwood , Julie Wixey	Improving brain oxygen levels in babies using stem cell treatment
Tim Donovan	Barbara Lingwood , Paul Colditz , Marloes Dekker-Nitert	Long-term consequences of altered neonatal adiposity
Barbara Lingwood	Michael Stark, Paul Colditz , Ian Wright, Yvonne Eiby	A pre-clinical trial of early blood transfusion for improving cerebral oxygen delivery in very preterm neonates
Paul Colditz	Melissa Lai , Stella T Bjorkman, Kirat Chand	Novel approaches to protecting the newborn brain
Paul Colditz	Barbara Lingwood , Marloes Dekker-Nitert, Tim Donovan , Peter Davies, Chong	Long-term consequences of altered neonatal adiposity
Katie Foxcroft	Katie Groom	STRIDER (NZAus): a randomised controlled trial of sildenafil therapy in dismal prognosis early-onset intrauterine growth restriction (New Zealand and Australia) (led by the University of Auckland)
Katie Foxcroft	Pieter Koorts , William Tarnow-Mordi	Does lactoferrin improve survival free from morbidity in very low birth weight infants? Lactoferrin Infant Feeding Trial: a randomised controlled trial
Paul Colditz	Roslyn Boyd, Atul Malhotra, Stephen Rose, Boualem Boashash, Michael Ditchfield, Michael Fahey, Kerstin Pannek, Randal Moldrich	Neurodevelopment of the preterm infant
Paul Colditz	Matthew Sanders, Roslyn Boyd, Margo Pritchard, Peter Gray, Michael O'Callaghan, Virginia Slaughter, Koa Whittingham	Enhanced parenting capacity to improve developmental outcomes in preterm infants
Paul Colditz	Barbara Lingwood , Kathryn Buller	BRAIN – Brain Research Advances in Newborns

2018 Collaborative Research Activity involving RBWH Research Group / Department

Collaborative Lead Researchers	RBWH Researchers	Research Project Title
James Roberts	Michael Breakspear, Sampsa Vanhatalo, Paul Colditz	Novel methods for early bedside detection and prognosis of preterm brain injury
Julie Wixey	Kirat Chand, Tracey Bjorkman, Paul Colditz	Contribution of systemic inflammatory response to brain injury in growth restricted newborns
Roslyn Boyd	I Novak, E Wallace, N Badawi, M Fahey, S Rose, P Colditz , J Ziviani, C Elliott, N Stott	Australasian Cerebral Palsy Clinical Trials Network (AusCP-CTN): optimizing interventions and effective services for children with cerebral palsy
Roslyn Boyd	Paul Colditz , S Rose, M Karunanithi, A Smith, A Scuffham, P Edwards, I Novak, C Morgan, N Badawi	Advancing Cerebral Palsy in Queensland
Stella Tracey Bjorkman	Paul Colditz , Sampsa Vanhatalo	Carbon dioxide as a treatment for seizures in the newborn
Roslyn Boyd	Novak, Euan Wallace, Nadia Badawi, Michael Fahey, Stephen Rose, Paul Colditz, Ziviani, Elliott, Stott	Australasian Cerebral Palsy Clinical Trials Network (AusCP-CTN): optimizing interventions and effective services for children with cerebral palsy
Paul Dawson	E Hurrion, Vicki Flenady, Barbara Lingwood , Yvonne Eiby, Paul Colditz , Pieter Koorts , Kumar	Improving health outcomes for preterm infants using a preclinical Pig Translational model (PigTail study)
Stella Tracey Bjorkman		Seizures and injury in the newborn hypoxic-ischemic brain

2018 Research Awards and Achievements

Recipient	Award	Event
Yvonne Eiby	Publication of the Month, June and September	UQCCR
Elliot Teo	Student Poster Winner	UQCCR 10-year Symposium
Elliot Teo	Top 10 short listing for the translational relevance prize	Translational Research Symposium 2018
Elliot Teo	Travel Award	Neuroimmunology Australia
Abirami Ratnasingham	Best Oral Presentation	Queensland Perinatal Consortium (QPact) Conference
Abirami Ratnasingham	Clinical Research Award	Royal Brisbane and Women's Hospital (RBWH) Healthcare Symposium
Abirami Ratnasingham	Three Minute Thesis (3MT) Competition Northside Heat: Winner	UQ Faculty of Medicine
Tracey Bjorkman	Fellowship	UQ Faculty of Medicine
Tracey Bjorkman	LMRF Ian Fraser Human Award	Lions Medical Research Foundation
Kirat Chand	Publication of the Month, February	UQCCR
Kirat Chand	ECR Oral presentation award – runner up	Fetal and Neonatal Workshop of Australia and New Zealand, Queenstown, New Zealand
Julie Wixey	Lions Dunning-Orlich NHMRC New Investigator Award	The University of Queensland
Julie Wixey	Early Career Researcher Poster Winner	UQCCR 10-year Symposium
Julie Wixey	Collaboration Travel Grant	UQCCR
Julie Wixey	Publication of the Month April	UQCCR
Julie Wixey	Early Career Investigator Prize for best oral presentation	Fetal and Neonatal Workshop of Australia and New Zealand, Queenstown, New Zealand

2018 Research Grants – Awarded

Investigators <i>(RBWH staff in bold)</i>	RBWH Research Groups/ Departments	Project Title	Granting Body	Amount in 2018	Total Amount <i>(years)</i>
Lai M, Bjorkman ST, Wixey J, Colditz P	Perinatal Research Centre	CO2 gas as an adjunctive neuroprotective therapy for hypoxic-ischemic encephalopathy (HIE)	RBWH and RBWH Research Project Grant	\$40,000	\$40,000 (2018)
Colditz P , Wixey J, Lai M, Bjorkman ST	Perinatal Research Centre	Stem cell treatment to protect the growth restricted newborn brain	RBWH and RBWH Research Project Grant	\$40,000	\$40,000 (2018)
Wixey J, Chand K	Perinatal Research Centre	Contribution of systemic inflammatory response to brain injury in growth restricted newborns	NHMRC Project Grant	\$179,185	\$358,371 (2018-2019)
Colditz P , Khosrotehrani K, Bjorkman T, Patel J, Wixey J	Perinatal Research Centre	Stem cell treatment for neonatal hypoxic ischemic encephalopathy	NHMRC Project Grant	\$318,065	\$954,195 (2018-2020)
James Roberts, Michael Breakspear, Samps Vanhatalo, Paul Colditz	Perinatal Research Centre	Novel methods for early bedside detection and prognosis of preterm brain injury	NHMRC Project Grant	\$210,293	\$630,880 (2018-2020)
Colditz P , Lingwood B, Bjorkman T, Wixey J, Dawson P, Boyd R, Eiby Y	Perinatal Research Centre	A pre-clinical intensive care facility to research long-term outcomes in neonates	2018 UQ MEI andfmr 2017 NHMRC Equipment Grant	\$200,343	\$200,343 (2018)
Colditz P , Khosrotehrani K, Wixey J	Perinatal Research Centre	Improving brain outcomes in the growth restricted newborn using placental stem cell treatment	Financial Markets Foundation for Children	\$46,666	\$140,000 (2018-2020)
Colditz P , Bjorkman T, Wixey J	Perinatal Research Centre	Inflammation in the growth restricted newborn brain	RBWH HIRF Research Project	In kind	In kind
Wong A, Finnigan S		Acute stroke endovascular treatment: expediting identification of eligible patients	RBWH and RBWH Research Project Grant	\$39,887	\$39,887 (2018)

2018 Research Publications

Journal Articles:

1. Popat H, Galea C, Evans N, Lingwood B, **Colditz PB**, Halliday R, et al. Effect of Delayed Cord Clamping on Cerebral Oxygenation in Very Preterm Infants. *Neonatology*. 2019;115(1):13-20
2. Wood K, Mantziaris E, Lingwood B, Couper J, Makrides M, Gibson RA, et al. The effect of maternal DHA supplementation on body fat mass in children at 7 years: follow-up of the DOMInO randomized controlled trial. *Prostaglandins Leukot Essent Fatty Acids*. 2018;139:49-54
3. Wixey JA, Reinebrant HE, Chand KK, Buller KM. Disruption to the 5-HT₇ Receptor Following Hypoxia-Ischemia in the Immature Rodent Brain. *Neurochem Res*. 2018;43(3):711-20
4. Wixey JA, Chand KK, Pham L, **Colditz PB**, Bjorkman ST. Therapeutic potential to reduce brain injury in growth restricted newborns. *J Physiol*. 2018;596(23):5675-86
5. Winter L, Sanders MR, R NB, Pritchard M, Gray PH, Whittingham K, et al. Predicting Attendance of a Preventive Parenting Intervention for Very Preterm Infants. *Infant Ment Health J*. 2018;39(6):699-706
6. Winter L, **Colditz PB**, Sanders MR, Boyd RN, Pritchard M, Gray PH, et al. Depression, posttraumatic stress and relationship distress in parents of very preterm infants. *Arch Womens Ment Health*. 2018;21(4):445-51
7. Poortvliet PC, Tucker KJ, **Finnigan S**, Scott D, Hodges PW. Experimental Pain Decreases Corticomuscular Coherence in a Force – But Not a Position-Control Task. *The Journal of Pain : official journal of the American Pain Society*. 2018
8. Pannek K, Frupp J, George JM, Fiori S, **Colditz PB**, Boyd RN, et al. Fixel-based analysis reveals alterations in brain microstructure and macrostructure of preterm-born infants at term equivalent age. *NeuroImage Clinical*. 2018;18:51-9
9. Mudge AM, Douglas C, Sansome X, Tresillian M, Murray S, S F, et al. Risk of 12-month mortality among hospital inpatients using the surprise question and SPICT criteria: a prospective study. *BMJ Support Palliat Care*. 2018;8(2):213-20
10. Miller SM, Pelly S, Kalanjati VP, Lee A, **Colditz PB**, Bjorkman ST. Identification and expression of a unique neonatal variant of the GABAA receptor alpha3 subunit. *Brain structure & function*. 2018;223(2):1025-33
11. Lingwood BE, Eiby YA, Bjorkman ST, Miller SM, Wright IMR. Supporting Preterm Cardiovascular Function. *Clin Exp Pharmacol Physiol*. 2018
12. Kong AHT, **Lai MM**, **Finnigan S**, Ware RS, Boyd RN, **Colditz PB**. Background EEG features and prediction of cognitive outcomes in very preterm infants: A systematic review. *Early Hum Dev*. 2018;127:74-84
13. George JM, Pannek K, Rose SE, Ware RS, **Colditz PB**, Boyd RN. Diagnostic accuracy of early magnetic resonance imaging to determine motor outcomes in infants born preterm: a systematic review and meta-analysis. *Dev Med Child Neurol*. 2018;60(2):134-46
14. George JM, Fiori S, Frupp J, Pannek K, Guzzetta A, David M, et al. Relationship between very early brain structure and neuromotor, neurological and neurobehavioral function in infants born <31 weeks gestational age. *Early Hum Dev*. 2018;117:74-82
15. **Finnigan S**, **Colditz PB**. What is the optimal frequency range for quantifying slow EEG activity in neonates? Insights from power spectra. *Clin Neurophysiol*. 2018;129(1):143-4
16. Eiby YA, Shrimpton NY, Wright IMR, Lumbers ER, **Colditz PB**, Duncombe GJ, et al. Reduced blood volume decreases cerebral blood flow in preterm piglets. *J Physiol*. 2018;596(23):6033-41
17. Al-Theyab NA, **Donovan TJ**, Eiby YA, **Colditz PB**, Lingwood BE. Fat trajectory after birth in very preterm infants mimics healthy term infants. *Pediatric obesity*. 2018.

2018 Conference Presentations – Invited Speaker, Oral and Poster

Invited Speaker:

1. **Paul Colditz**. Keynote. Preconception healthcare and primary prevention. Improving outcomes: Queensland mothers and babies. TRI, Brisbane, 26 February 2018
2. **Paul Colditz**. Invited speaker, Best practice in research translation utilising new technologies to improve outcomes in maternity and infant specialty hospitals. 42nd World Hospital Congress. Brisbane. 10-12 October 2018
3. **Finnigan S**. EEG changes in stroke, aging and cognitive decline. Applied Neuroscience Society of Australasia Annual Conference. 2018
4. Hammill J. Keynote. “Fetal Alcohol Spectrum Disorders (FASD) is a lifelong brain-based disorder that carries a transgenerational burden of addictions in tandem with physical, mental and cognitive disabilities”. Addictions Conference, QT Hotel, Gold Coast. 29th May 2018
5. Hammill J. Seminar. “Transgenerational Trauma associated with Perinatal Brain Injury”, Ausmed Midwifery“. Fetal Alcohol Spectrum Disorders” Challenges CPD Conference, Mercure Hotel, Brisbane. 17th May 2018.

Oral Presentations:

1. Kong AHT, Lai MM, Finnigan S, Ware RS, Boyd RN, **Colditz PB**. Using EEG and MRI at term equivalent age in very preterm infants to predict cognitive outcome. 22nd Annual Congress of the Perinatal Society of Australia and New Zealand (PSANZ); Auckland, New Zealand: *Journal of Paediatrics and Child Health* 2018;54(S1):28
2. J Wixey, K Sukumar, S Miller, K Goasdoue, **P Colditz**, ST Bjorkman, K Chand. Ibuprofen treatment to reduce inflammation and neuronal injury in the growth restricted neonatal brain. 32nd Annual Fetal and Neonatal Workshop of Australia and New Zealand, Queenstown, New Zealand. March 2018 – *International Oral*
3. K Chand, S Miller, K Goasdoue, **P Colditz**, ST Bjorkman, J Wixey. Neuropathology in the IUGR piglet model. 32nd Annual Fetal and Neonatal Workshop of Australia and New Zealand, Queenstown, New Zealand. March 2018 – *International Oral*
4. K Goasdoue, S Miller, K Chand, E Teo, **P Colditz**, J Wixey, ST Bjorkman. A time-course of blood-brain barrier disruption in a large animal model of neonatal hypoxic-ischemic encephalopathy. 32nd Annual Fetal and Neonatal Workshop of Australia and New Zealand, Queenstown, New Zealand. March 2018 – *International Oral*

Oral Presentations: (cont):

5. Kong, Finnigan, Pannek, Fripp, Ware, George, Rose, Boyd, **Colditz**. Using EEG and MRI at term equivalent age in very preterm infants to predict visual and cognitive outcome. 38th ANS Annual Scientific Meeting. Brisbane, Australia. Dec 4-6, 2018
6. Elliot Teo, Tracey Bjorkman, Kirat Chand, Julie Wixey, Stephanie Miller, Seen-Ling Sim Jatin Patel, Kiarash Khosrotehrani, **Paul Colditz**. Stem cells for hypoxic-ischaemic encephalopathy. 32nd Annual Fetal and Neonatal Workshop of Australia and New Zealand, Queenstown, New Zealand. March 2018 – *International Oral*
7. Abirami Ratnasingham, **Timothy Donovan**, Yvonne Eiby, Marloes Dekker Nitert, Barbara Lingwood (2018) Reduced fat-free mass at birth is a predictor of childhood obesity. Third annual meeting of the Queensland Perinatal Consortium, Brisbane, Australia
8. Ratnasingham, Abirami, Eiby, Yvonne A., Dekker Nitert, Marloes, Donovan, Timothy and Lingwood, Barbara E. Reduced fat-free mass at birth is a predictor of childhood obesity. UQ Faculty of Medicine Clinical and Public Health Postgraduate Symposium, Brisbane, Australia. 22-23 November 2018
9. Eiby YA, Shrimpton NY, Wright IMR, Lumbers ER, **Colditz PB**, Duncombe GJ, Lingwood BE. Reduced blood volume decreases cerebral blood flow in preterm neonates. Twenty-Second Annual Congress of the Perinatal Society of Australia and New Zealand, Auckland, New Zealand. March 25-28, 2018
10. Kong, Finnigan, Pannek, Ware, George, Boyd, **Colditz**. Using EEG and MRI at term equivalent age in very preterm infants to predict cognitive outcome. 2018 Clinical and Public Health Symposium. Brisbane, Australia. Nov 22-23, 2018
11. Abirami Ratnasingham, **Timothy Donovan**, Yvonne Eiby, Marloes Dekker Nitert, Barbara Lingwood. Reduced fat-free mass at birth is a predictor of childhood obesity. 26th Annual Royal Brisbane Women's Hospital Healthcare Symposium, Brisbane, Australia. 11-13 September 2018
12. Lingwood BE, Al-Theyab NA, Donovan TJ, Eiby YA, **Colditz PB**. Predictors of adiposity in very preterm infants before term corrected age. (2018) Twenty-Second Annual Congress of the Perinatal Society of Australia and New Zealand, Auckland, New Zealand
13. Dawson PA, Eiby YA, Barnes SK, Boyd RN, Badawi N, Koorts PJ, Kumar S, Flenady VJ, Hurrion EM, **Colditz PB**, Lingwood BE (2018) Preterm piglets are a model of human preterm infant sulphate deficiency. Twenty-Second Annual Congress of the Perinatal Society of Australia and New Zealand, Auckland, New Zealand
14. Kong, Finnigan, Pannek, Ware, George, Boyd, Colditz. Using EEG and MRI at term equivalent age in very preterm infants to predict cognitive outcome. 27th annual RBWH Healthcare Symposium. Brisbane, Australia. Sep 11-13, 2018.

Poster Presentations:

1. Loudon W, Finnigan S, Tippett V, **Wong A**. Pre-hospital identification of stroke patients eligible for clot retrieval: investigating the value of EEG. Council of Ambulance Authorities Annual Congress. 2018
2. Dawson PA, Eiby YA, Barnes SK, Boyd RN, Badawi N, Koorts PJ, Kumar S, Flenady VJ, Hurrion EM, **Colditz PB**, Lingwood BE. Preterm piglets are a model of human preterm infant sulphate deficiency. Twenty-Second Annual Congress of the Perinatal Society of Australia and New Zealand, Auckland, New Zealand. March 25-28, 2018
3. Kong, Finnigan, Pannek, Ware, George, Rose, Boyd, **Colditz**. Brain microstructure assessed using MRI predicts cognitive function at 12 months of age in very preterm infants. 38th ANS Annual Scientific Meeting. Brisbane, Australia. Dec 4-6, 2018
4. Yvonne A Eiby, S. Tracey Bjorkman, Stephanie M Miller, Kirat K Chand, **Paul B Colditz**, Barbara E Lingwood. (2018) Volume expansion using saline fails to support blood pressure and is associated with white matter injury in preterm piglets. Third annual meeting of the Queensland Perinatal Consortium, Brisbane, Australia
5. Al-Theyab NA, Donovan TJ, Eiby YA, **Colditz PB**, Lingwood BE (2018) When and why do preterm infants become fat? Third annual meeting of the Queensland Perinatal Consortium, Brisbane, Australia
6. Ratnasingham, Abirami, Eiby, Yvonne A., Dekker Nitert, Marloes, **Donovan, Timothy** and Lingwood, Barbara E. Reduced fat-free mass at birth is a predictor of childhood obesity. UQ Centre for Clinical Research 10 Year Anniversary Symposium, Brisbane, Australia. 10 September 2018
7. Lingwood BE, Al-Theyab NA, Donovan TJ, Eiby YA, **Colditz PB**. (2018) Predictors of adiposity in very preterm infants before term corrected age. Third annual meeting of the Queensland Perinatal Consortium, Brisbane, Australia
8. Yvonne A Eiby, S. Tracey Bjorkman, Stephanie M Miller, Kirat K Chand, **Paul B Colditz**, Barbara E Lingwood. (2018) Volume expansion using saline fails to support blood pressure or reduce white matter injury in preterm piglets. UQCCR 10 year anniversary open day, Brisbane, Australia
9. Yvonne A Eiby, S. Tracey Bjorkman, Stephanie M Miller, Kirat K Chand, **Paul B Colditz**, Barbara E Lingwood. (2018) Volume expansion using saline fails to support blood pressure in preterm piglets. Annual Royal Brisbane Women's Hospital Healthcare Symposium, Brisbane, Australia
10. Lingwood BE, Al-Theyab NA, Donovan TJ, Eiby YA, **Colditz PB**. (2018) Predictors of adiposity in very preterm infants before term corrected age. Twenty-Second Annual Congress of the Perinatal Society of Australia and New Zealand, Auckland, New Zealand. March 25-28, 2018
11. Al-Theyab NA, Donovan TJ, Eiby YA, **Colditz PB**, Lingwood BE (2018) When and why do preterm infants become fat? The Twenty-Sixth Annual Royal Brisbane Women's Hospital Healthcare Symposium, Brisbane, Australia
12. Kong, Pannek, Finnigan, Ware, George, Rose, Boyd, **Colditz**. Brain microstructure assessed using MRI predicts cognitive function at 12 months of age in very preterm infants. UQCCR 10-year symposium. Brisbane, Australia. Sep 10 2018
13. Rinaldi Pretorius, Kirat Chand, Stephanie Miller, Kate Goasdoue, **Paul Colditz**, Tracey Bjorkman, Julie Wixey. Microglial activation phenotypes in intrauterine growth restricted newborns. SBMS International Postgraduate Symposium, St Lucia, Brisbane. November 2018
14. Lara Jones, Elliot Teo, Stephanie Miller, Kirat Chand, Julie Wixey, **Paul Colditz**, Tracey Bjorkman. Investigating the effect of placental stem cells on the blood brain barrier in a model of hypoxic-ischemic encephalopathy. SBMS International Postgraduate Symposium, St Lucia, Brisbane. November 2018
15. Kate Goasdoue, Kirat Chand, Stephanie Miller, **Paul Colditz**, Tracey Bjorkman. Seizures are associated with blood-brain barrier disruption in an animal model of neonatal hypoxic-ischaemic encephalopathy. RBWH Symposium, Brisbane. September 2018

Poster Presentations (cont):

16. Julie Wixey, Kishen Sukumar, Stephanie Miller, K Goasdoue, **P Colditz**, ST Bjorkman, K Chand. Ibuprofen administration to the growth restricted newborn reduces neuroinflammation and neuronal and white matter injury. RBWH Symposium, Brisbane. September 2018
17. Rinaldi Pretorius, Kirat Chand, Stephanie Miller, Kate Goasdoue, **Paul Colditz**, Tracey Bjorkman, Julie Wixey. Microglial activation phenotypes in the intrauterine growth restricted neonatal brain. RBWH Symposium, Brisbane. September 2018
18. J Wixey, S Miller, K Goasdoue, **P Colditz**, ST Bjorkman, K Chand. Microglial and astrocytic response is associated with cell death and decreased cellular proliferation in the intrauterine growth restricted newborn brain. 4th International Society of Neuroimmunology Conference, Brisbane, Australia. August 2018
19. Qiao Ding, Kaamini Kesevan, T. Tracey, K-M Lee, K.K. Chand, P. Thakre, E. Wimberger, A. Russell, R. Kanjhan, L. Jeffree, M. Colditz, R. Henderson, P. McCombe, K. Forrest, M. Devine, M. Hilliard, M.C. Bellingham, N. Lavidis, E. Wolvetang, S. T. Ngo, and Peter G Noakes. The neuromuscular junction the hidden player in ALS. 29th International Symposium on MND/ALS
20. Elliot Teo, Tracey Bjorkman, Kirat Chand, Julie Wixey, Stephanie Miller, Seen-Ling Sim, Jatin Patel, Kiarash Khosrotehrani, **Paul Colditz**. Placental-derived stem-cells as a treatment for newborn hypoxic-ischemic encephalopathy. 14th International Congress of Neuroimmunology, Brisbane, Australia. August 2018
21. Elliot Teo, Tracey Bjorkman, Kirat Chand, Julie Wixey, Stephanie Miller, Seen-Ling Sim, Jatin Patel, Kiarash Khosrotehrani, **Paul Colditz**. Human mesenchymal and endothelial progenitor cells from the placenta to the hypoxic ischemic brain. Translational Research Symposium, Translational Research Institute, Brisbane, Australia. July 2018
22. ST Bjorkman, J Patel, JA Wixey, KK Chand, SM Miller, E Teo, K Khosrotehrani, **PB Colditz**. Stem cells for the treatment of neonatal hypoxic ischemic encephalopathy. 11th Hershey Conference on Developmental Brain Injury. California, US. June 2018
23. Elliot Teo, Tracey Bjorkman, Kirat Chand, Julie Wixey, Stephanie Miller, Seen-Ling Sim Jatin Patel, Kiarash Khosrotehrani, **Paul Colditz**. Stem-cells as a treatment for newborn hypoxic-ischemic encephalopathy. Queensland Postgraduate Medical Research Student Conference. Brisbane, Australia. May 2018
24. Elliot Teo, Tracey Bjorkman, Kirat Chand, **Julie Wixey**, Stephanie Miller, Seen-Ling Sim Jatin Patel, Kiarash Khosrotehrani, **Paul Colditz**. From vein to brain: Homing of placental-derived human stem cells in piglet model of hypoxic-ischemic encephalopathy. RBWH Symposium, Brisbane. September 2018
25. Kate Goasdoue, Kirat K Chand, Stephanie M Miller, Julie A Wixey, **Paul B Colditz**, S Tracey Bjorkman. Blood-brain barrier disruption is associated with seizure in a pre-clinical model of neonatal Hypoxic-Ischaemic Encephalopathy. UQCCR 10 years Symposium. Brisbane, Australia. September 2018
26. Elliot Teo, Tracey Bjorkman, Kirat Chand, Julie Wixey, Stephanie Miller, Seen-Ling Sim Jatin Patel, Kiarash Khosrotehrani, **Paul Colditz**. From vein to brain: homing of placental-derived human stem cells in piglet model of hypoxic-ischemic encephalopathy. UQCCR 10 years Symposium. Brisbane, Australia. September 2018.

Other Communications and Outputs:

1. Hammill J. Symposium. "Fetal Alcohol Spectrum Disorders (FASD), a preventable lifelong brain-based disorder that carries a transgenerational burden physical, mental and cognitive disabilities". Synapse, Brisbane. 25th October 2018
2. Hammill J, Webinar. "Fetal Alcohol Spectrum Disorders as an Indigenous Human Rights Issue". Queensland Health Insight Clinical Support Services, Biala, Brisbane. 17th October 2018
3. Hammill J. Seminar. "FASD Awareness Day". Lady Cilento Children's Hospital, Brisbane. 7th September 2018
4. Cullen J, Hammill J, Livecast. "Neurocognitive Disability & the Criminal Justice System", Queensland Law Society, Brisbane. 19th May 2018
5. Hammill J. Seminar. "Fetal Alcohol Spectrum Disorders", Lady Cilento Children's Hospital, Brisbane. 2nd May 2018
6. Hammill J. Seminar. "Foetal Programming of Poor Life Outcomes, Lady Cilento Children's Hospital, Brisbane. 21st February 2018
7. Hammill J. & Cullen J. Seminar. Qld Law Society Reconciliation Committee. QLS House, Brisbane, 21st February 2018
8. Hammill J. Seminar. "Mums and Bubs", Institute for Urban Indigenous Health, Caboolture, 15th February 2018
9. Hammill J. Seminar. "Healthy Options", Mon Komo Hotel, Redcliffe, 7th February 2018
10. Hammill J. Minister for Resources, Champion Cherbourg Aboriginal Community, Dr Anthony Lynham, Stafford. 27th July 2018
11. Hammill J. Youth Justice Strategy, Amnesty International & Parliamentary Roundtable, Queensland Parliament, Brisbane. 19th September 2018
12. K.K Chand. Neuropathology in the Intrauterine Growth Restricted Newborn Piglet. Pathology Grand Rounds Seminar – Pathology Queensland
13. K.K Chand. Under the microscope – Neuropathology in growth restricted newborns. UQCCR Seminar Series. December 2018
14. Loudon W, Finnigan S, Tippet V, Wong A. Pre-hospital identification of stroke patients eligible for clot retrieval: investigating the value of EEG. Presentation to QAS Clinical Managers
15. J Wixey. Neuroprotective strategies to protect the growth restricted newborn brain. UQCCR Seminar Series, Brisbane. September 2018
16. J Wixey. Presentation. 'Stem cell treatment in the Newborn'. Year 8 students at The Gap State High School. December 2018.

Queensland Centre for Gynaecological Cancer

The Queensland Centre for Gynaecological Cancer (QCGC) is a state-wide service for the management of women with gynaecological cancer. QCGC Research is the research branch of QCGC. The Director of QCGC Research is Professor Andreas Obermair who leads and develops the unit to produce meaningful research outcomes.

QCGC Research's mission is to research and develop the best standard of care for women experiencing gynaecological cancer. This may include finding causes for and preventing gynaecological cancer; and finding better treatment options to cure women affected by gynaecological cancer. QCGC Research's focus is on conducting surgical clinical trials in the field of gynaecological cancer but we also perform ground-breaking work outside the conventional clinical trials framework.

Our research is funded partly by competitive research grants (NHMRC project grants, Smart State research grants, Cancer Australia), by support from individual and corporate donors as well as from fundraising events. Our research activities help improve patient outcomes by researching the most effective treatment for women with gynaecological cancers.

In 2018 we completed training at two Queensland Health Hospitals for the IMAGINE Study. The IMAGINE Study aims to implement and evaluate a model of training for practising gynaecologists in Total Laparoscopic Hysterectomy. We also continued recruiting for the ECHO Trial which examines the benefits of exercise during chemotherapy for ovarian cancer. This study is a collaboration between the Queensland University of Technology, NHMRC Clinical Trials Centre and QCGC Research. The feMMe trial, which allows a large number of women to have effective treatment of their endometrial cancer without the need for major surgery and its implications, continued recruitment in 2018.

2018 Research Positions: Coordinators, Fellow, Adjunct and Honorary Positions

Name	Type of Fellowship	Research Program	University (years)
Nigel Armfield	Research Fellow	Gynaecological Oncology	The University of Queensland (current)
Trudi Cattley	Clinical Research Manager	Gynaecological Oncology	The University of Queensland (current)
Vanessa Behan	Clinical Trial Manager	Laparoscopic Approach to Cervical Carcinoma	The University of Queensland (current)
Vanessa Taylor	Clinical Trial Manager	Improving the treatment for women with early stage cancer of the uterus	The University of Queensland (current)
Kerry Millgate	Clinical Trial Coordinator	Gynaecological Oncology	The University of Queensland (current)
Anne Hughes	Project Manager	The Implementation of Minimally Invasive Hysterectomy Trial	The University of Queensland (current)

2018 Current RBWH Research Group / Department Led Research Activity

RBWH Research Group/Department Lead Researchers	Collaborative Researchers	Research Project Title
Prof Andreas Obermair	Monika Janda (QUT)	A stepped wedge cluster trial to implement and evaluate a model of training for practising gynaecologists in Total Laparoscopic Hysterectomy
Prof Andreas Obermair	Monika Janda (QUT), Peta Forder (Uni of Newcastle), Jim Nicklin (Gyn Onc), Lewis Perrin (Mater), Tom Manolitsas (Monash), Yee Leung (KEMH), Russell Hogg (Westmead), Rhonda Farrell (Royal Hosp Women), Martin Oehler (Royal Adelaide Hosp), Peter Sykes (Christchurch), Merran Williams (Bloomhill Cancer Care), Val Gebiski (Uni of Sydney)	Long-term follow-up of the Laparoscopic Approach to Carcinoma of the Endometrium (LACE) Trial-survival outcomes.
Prof Andreas Obermair	Jim Nicklin (Gyn Onc), Russell Land (Gyn Onc), Andrea Garrett (Gyn Onc), Amy Tang (Gyn Onc), Lewis Perrin (Mater), Marcelo Nascimento (GCUH), Jonathan Carter (Chris O'Brien), Orla McNally (The Women's), Kym Reid (Monash), Yee Leung (KEMH), Stuart Salfinger (SJOG), Peter Sykes (Christchurch), Cecile Bergzoll (Wellington), Lois Eva (Auckland)	A Phase II Randomised Clinical Trial of Mirena® ± Metformin ± Weight Loss Intervention in Patients with Early Stage Cancer of the Endometrium
Prof Andreas Obermair, Paul Thomas	Jim Nicklin (Gyn Onc), Russell Land (Gyn Onc), Andrea Garrett (Gyn Onc), Amy Tang (Gyn Onc)	Impact of gated PET/CT on the diagnosis of distant metastases of advanced epithelial ovarian, fallopian tube, and primary peritoneal cancer

2018 Collaborative Research Activity involving RBWH Research Group / Department

Collaborative Lead Researchers	RBWH Researchers	Research Project Title
Sandi Hayes (QUT)	Prof Andreas Obermair (Gyn Onc), Jim Nicklin (Gyn Onc), Russell Land (Gyn Onc), Andrea Garrett (Gyn Onc), Amy Tang (Gyn Onc)	A Phase III randomised controlled trial of exercise during chemotherapy for patients commencing first line treatment for ovarian cancer
Pedro Ramirez (MD Anderson USA)	Prof Andreas Obermair (Gyn Onc), Jim Nicklin (Gyn Onc), Russell Land (Gyn Onc), Andrea Garrett (Gyn Onc)	A Phase III Randomized Clinical Trial Comparing Laparoscopic or Robotic Radical Hysterectomy versus Abdominal Radical Hysterectomy in Patients with Early Stage Cervical Cancer

2018 Research Grants – Awarded

Investigators (RBWH staff in bold)	RBWH Research Groups/ Departments	Project Title	Granting Body	Amount in 2018	Total Amount (years)
Obermair A , Quinn M, Brennan D, Armes J, Janda M, GebSKI V, Carter J, Leung Y, Perrin L, Bunting M, Oehler M, Nicklin J , Strakosch C, Williams M	QCGC Research	A phase II randomised clinical trial of Mirena ± metformin ± weight loss intervention in patients with early stage cancer of the endometrium	Cancer Australia	\$85,000	\$540,000 (2015-2018)
Obermair A , Janda M, Forder P, Nicklin J , Perrin L, Manolitsas T, Leung Y, Hogg R, Farrell R, Oehler M, Sykes P, Williams M, GebSKI V.	QCGC Research	Long-term follow-up of the Laparoscopic Approach to Carcinoma of the Endometrium (LACE) Trial-survival outcomes	Cancer Australia	\$127,000	\$380,674 (2016-2018)
Janda M, Obermair A , GebSKI V, Graves N, Armfield N	QCGC Research	The Implementation of Minimally Invasive hysterectomy (IMAGINE) trial	NHMRC Partnership Grant	\$265,180	\$893,854 (2018-2020)

2018 Research Publications

Journal Articles:

- Janda, M.; **McGrath S.**; **Obermair A.** Challenges and controversies in the conservative management of uterine and ovarian cancer *Best Pract Res Clin Obstet Gynaecol* (2018)
- Nagle, C. M.; O'Mara, T. A.; Tan, Y.; Buchanan, D. D.; **Obermair A.**; Blomfield, P.; Quinn, M. A.; Webb, P. M.; Spurdle, A. B. Endometrial cancer risk and survival by tumor MMR status *J Gynecol Oncol* (2018) 29 3
- Smith D, Stewart CJR, Clarke EM, Lose F, Davies C, Armes J, **Obermair A**, Brennan D, Webb PM, Nagle CM, Spurdle AB. ER and PR expression and survival after endometrial cancer. *Gynecol Oncol.* (2018) 148 2 258-266
- Janda M, Armfield NR, Page K, Kerr G, Kurz S, Jackson G, Currie J, Weaver E, Yazdani A, **Obermair A.** Factors influencing women's decision making in hysterectomy. *Patient Educ Couns* (2018) 101 3 504 - 510
- Sanjida S, Janda M, McPhail SM, Kissane D, Couper J, Scott J, **Obermair A.** How many patients enter endometrial cancer surgery with psychotropic medication prescriptions, and how many receive a new prescription perioperatively? *Gynecol Oncol* (2018)
- Celentano, V.; Smart, N.; McGrath, J.; Cahill, R. A.; Spinelli, A.; **Obermair A.**; Hasegawa, H.; Lal, P.; Almoudaris, A. M.; Hitchins, C. R.; Pellino, G.; Browning, M. G.; Ishida, T.; Luvisetto, F.; Cingiloglu, P.; Gash, K.; Harries, R.; Harji, D.; Di Candido, F.; Cassinotti, E.; McDermott, F. D.; Berry, J. E. A.; Battersby, N. J.; Platt, E.; Campaign, N. J.; Keeler, B. D.; Boni, L.; Gupta, S.; Griffith, J. P.; Acheson, A. G.; Cecil, T. D.; Coleman, M. G. LAP-VEGaS Practice Guidelines for Reporting of Educational Videos in Laparoscopic Surgery: A Joint Trainers and Trainees Consensus Statement *Ann Surg* (2018) 268 6 920-926
- Ramirez, P. T.; Frumovitz, M.; Pareja, R.; Lopez, A.; Vieira, M.; Ribeiro, R.; Buda, A.; Yan, X.; Shuzhong, Y.; Chetty, N.; Isla, D.; Tamura, M.; Zhu, T.; Robledo, K. P.; GebSKI, V.; Asher, R.; Behan, V.; **Nicklin J. L.**; Coleman, R. L.; Obermair A. Minimally Invasive versus Abdominal Radical Hysterectomy for Cervical Cancer *N Engl J Med* (2018) 379 20 1895-1904
- Steele, M. L.; Janda, M.; Vagenas, D.; Ward, L. C.; Cornish, B. H.; Box, R.; Gordon, S.; Matthews, M.; Poppitt, S. D.; Plank, L. D.; Yip, W.; Rowan, A.; **Reul-Hirche H.**; **Obermair A.**; Hayes, S. C. Normative Interlimb Impedance Ratios: Implications for Early Diagnosis of Uni- and Bilateral, Upper and Lower Limb Lymphedema *Lymphat Res Biol* (2018)

Journal Articles: (cont):

9. Armfield, N. R.; Janda, M.; **Obermair A.** Obesity in total laparoscopic hysterectomy for early stage endometrial cancer: health gain and inpatient resource use *Int J Qual Health Care* (2018)
10. Higgs P, Janda M, Asher R, GebSKI V, Forder P, **Obermair A.** Pelvic floor functional outcomes after total abdominal versus total laparoscopic hysterectomy for endometrial cancer. *Am J Obstet Gynecol.* (2018) 218 4 419
11. Janda M, Armfield NR, Kerr G, Kurz S, Jackson G, Currie J, Page K, Weaver E, Yazdani A, **Obermair A.** Surgical approach to hysterectomy and barriers to using minimally invasive methods. *Aust N Z J Obstet Gynaecol* (2018) 58(6): 690-695
12. Nagle, C. M.; Crosbie, E. J.; Brand, A.; **Obermair A.**; Oehler, M. K.; Quinn, M.; Leung, Y.; Spurdle, A. B.; Webb, P. M. The association between diabetes, comorbidities, body mass index and all-cause and cause-specific mortality among women with endometrial cancer *Gynecol Oncol* (2018) 150 1 99-105
13. Asher R, **Obermair A**, Janda M, GebSKI V. Disease-Free and Survival Outcomes for Total Laparoscopic Hysterectomy Compared with Total Abdominal Hysterectomy in Early-Stage Endometrial Carcinoma: A Meta-analysis. *Int J Gynecol Cancer* (2018) 28 3 529-538
14. **Obermair A.**; Janda, M.; GebSKI, V. All-cause death in young women with endometrial cancer who receive progesterone therapy *Am J Obstet Gynecol* (2018) 219 1 119
15. Robertson JA, **Sanday K**, **Nicklin J.** Malignant ovarian germ cell tumours in the post-menopausal population. *Aust N Z J Obstet Gynaecol.* 2018 Oct 2.

2018 Conference Presentations – Invited Speaker, Oral and Poster

Invited Speaker:

1. **Obermair A**, Ramirez P. Incidence of adverse events comparing abdominal vs. minimally invasive radical hysterectomy in patients with early-stage cervical cancer: LACC trial. 17th Biennial Meeting of the International Gynecologic Cancer Society; September 14-16, 2018; Kyoto, Japan
2. Ramirez P, **Obermair A.** Unexpected outcome in LACC study – are there any potential alternative explanations for the declining survival and to confirm the association with MIS? 17th Biennial Meeting of the International Gynecologic Cancer Society; September 14-16, 2018; Kyoto, Japan.

Oral Presentations:

1. **Obermair A.**; Graves N.; Coleman M.; et al. The Implementation of a standardized training program for specialist gynaecologists to decrease the rate of open, abdominal hysterectomy. Royal Australian and New Zealand College of Obstetricians and Gynaecologists (RANZCOG) 2018 Annual Scientific Meeting; September 2018; Adelaide, Australia
1. **Obermair A.** Management of Endometrial Cancer. Indonesian Society of Gynecologic Oncology (INASGO) – Biennial Meeting. November 2018; Indonesia
1. **Obermair A.** A critical appraisal of laparoscopic surgery in gynaecological cancer treatment: the LACC and LACE trials revisited. European Society for Gynaecological Endoscopy (ESGO) State of the Art Conference; October 2018; Lyon, France.

Poster Presentations:

1. **Obermair A**, Armfield N, Forder P, Janda M. Achieving a healthy weight after endometrial cancer surgery – Results from 10-year follow-up of the Laparoscopic Approach to Cancer of the Endometrium (LACE) randomised controlled trial. 17th Biennial Meeting of the International Gynecologic Cancer Society; September 14-16, 2018; Kyoto, Japan.