



# WOMEN'S & NEWBORN SERVICES

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**A/Prof Karin Lust**  
**Service Director**  
Women's and Newborn Services

Women's and Newborn services (WNS) offer a wide, diverse and innovative range of health care services to women, infants and families from across QLD and beyond. We are dedicated to evidenced based, quality interdisciplinary health care which is evident in our commitment to expanding research within our service line.

In 2018, we established a research strategic plan for the service line and have made excellent progress on many elements of that plan. We will undertake a refresh of our strategic plan in early 2020.

In the last year, our research productivity has improved dramatically with a nearly 30% improvement in research publications and research higher degree students. Research leadership is now embedded in the service line. This is critical in our ongoing drive to deliver high quality care.

Overall, there are 11 trials currently underway with 4 trials anticipated to commence in 2020. There have been 2 new RBWH Foundation scholarships awarded with 1 RBWH Foundation scholarship ongoing. Added to this achievement, there have been 7 RBWH Foundation Project Grants conferred on Women's and Newborn services which represents 27% of the grants awarded.

WNS has 12 PhD or research higher degree qualified clinical staff, and 9 clinical staff currently undergoing research higher degrees.

We continue to have strong links with our research partners across Brisbane Diamantina Health Partners, Queensland Institute of Medical Research, The University of Queensland, Queensland University of Technology, Griffith University, Australian Catholic University, and many professional organizations. This leads to high quality research supervision, grant management, and collaboration.

# WOMEN'S & NEWBORN SERVICES *(cont)*



**Prof Leonie Callaway**  
**Director of Research**  
Women's and Newborn Services

## Key highlights of the year included:

The department of Obstetrics and Gynaecology undertakes research in Obstetrics, Gynaecology, Maternal Fetal Medicine, Paediatric and Adolescent Gynaecology, Urogynaecology and Reproductive Endocrinology and Infertility. There has been an increase in the number of posters and presentations at national and international meetings, with extensive trainee engagement in research. The department provides tertiary and quaternary obstetrics and gynaecology services to MNHHS and QLD. Research undertaken is collaborative, and both innovative as well as addressing research into common clinical issues to improve patient care. Members of the dept have presented and published nationally and internationally.

The department of Obstetric Medicine continues to conduct high level research into complex pregnancies. There are a large number of collaborate research projects being undertaken with engagement in a range of nationally funded trials (Medical Research Futures Fund, NH&MRC) around asthma, obstetric cholestasis, and the early diagnosis and treatment of gestational diabetes. The department is heavily active on a local level having five oral and sixteen poster presentations at the annual Australasian Scientific meeting this year, one of which was awarded the best scientific poster.

Research in the Grantley Stable Neonatal Unit (GSNU) continues to grow. A research survey conducted earlier this year was fruitful in identifying strengths and opportunities for improving research capacity and collaboration. Securing funding for a part time neonatal research coordinator and several successful RBWH Hospital Foundation Research Grants means in 2020, the team will continue to build on these exciting developments.

2019 has been a successful year for the Perinatal Research Centre (PRC). We were delighted for Prof Paul Colditz to be awarded Researcher of the Year at the 2019 Metro North Research Excellence Awards. Our ongoing funding is creating amazing results and media interest and we look forward to another year of high impact translational research. 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.

The Queensland Centre for Gynaecological Cancer (QCGC) 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 2019 we continued our studies of exercise in ovarian cancer; completed recruitment in a trial of non-surgical treatment for early stage endometrial cancer; and continued the IMAGINE Study which aims to implement and evaluate a model of training for practising gynaecologists in Total Laparoscopic Hysterectomy.

# GRANTLEY STABLE NEONATAL UNIT (GSNU)

RBWH Neonatal Research continues to work towards a strategic plan to improve research resources. A survey was conducted to gauge perceptions behind strengths and weaknesses of research within the department of neonatology and to identify potential opportunities for improvement. Results showed that staff were keen to engage in more clinical research, recognising that assisting with research was an important professional requirement.

The Humidity Trial, a randomised controlled trial investigating the effects of humidification in the second week of life for extremely preterm infants has started recruitment. The study is led by Clinical nurse Gill Noreiks and is projected to take 2 years to recruit all participants required to detect differences between 2 different levels of humidification and any effects on body temperature and electrolyte balance. Research culture continues to improve with increasing numbers attending the monthly unit research meeting including attendance by members of collaborating research groups.

RBWH Neonatal Research has been successful in securing much needed funding for a part-time Research Coordinator position to assist with increasing our research culture and productivity within the unit. This senior nursing position over the next 2 years will provide a central person to evaluate, monitor and report on all research activities and outcomes, as well as assist with development of research protocols and managing approval of ethical and clinical governance. Another exciting achievement has been setting up a tied fund account through the RBWH Foundation to provide parents and families the opportunity to donate and raise funds for our unit's research activities. A few of our proposed clinical trials have progressed through the EOI stage to the next round of research grant funding.

RBWH Neonatal Research continues to make progress with collaboration and building of the research group. Deanne August is our new research coordinator, marking our first step towards increasing dedicated research time and funding.

## 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>
Donna Franklin	PhD, University of Queensland	Nasal High flow therapy in infants with bronchiolitis	John Fraser, <b>Mark Davies</b>
Luke Jardine	PhD, University of Queensland	Development of early predictors of long-term neurodevelopmental outcome in preterm infants	<b>Mark Davies, Paul Colditz</b>
<b>Michelle Paliwoda</b>	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, <b>Mark Davies</b>
Alison D'Souza	MPhil, University of Queensland	The impact of macronutrient intake and growth on neurodevelopmental outcome in preterm infants	<b>Tim Donovan</b> , Barbara Lingwood, Yvonne Eiby, <b>Paul Colditz</b>
<b>Melissa Lai</b>	PhD, University of Queensland	Towards Optimizing Neurodevelopmental Outcomes of Very Preterm Infants; the Effects of Infant Massage by the Mother	<b>Paul Colditz</b> , Simon Finnigan, Jurgen Fripp
Abirami Ratnasingham	PhD, University of Queensland	Long-term consequences of altered neonatal adiposity	Barbara Lingwood, <b>Tim Donovan</b> , Yvonne Eiby, Marloes Dekker, Peter Davis

## RBWH Research Staff with research roles, positions or appointments: e.g. Coordinators, Fellow, Adjunct and Honorary appointments

Name <i>(RBWH Staff in bold)</i>	Type of Position	Research Program	Affiliated University/ies
<b>Katie Foxcroft</b>	Adjunct Fellow/ Clinical Trial Coordinator	PREBO, Supreme, PAEAN, NEBO	University of Queensland
<b>Deanne August</b>	Research Coordinator	NOVA	Griffith University
<b>Gill Lack</b>	Research Nurse	NOVA, PEACH	University of Queensland
<b>Linda Cobbald</b>	Research Nurse	NOVA	
<b>Lisa McKeown</b>	Research Nurse	PAEAN, NEBO	University of Queensland

## Current RBWH Research Group / Department Led Research Activity

RBWH Research Group / Department Led Researchers <i>(RBWH staff in bold)</i>	Collaborative Researchers and Others <i>(RBWH staff in bold)</i>	Research Project Title
Deborah Gilmour	Mark Davies	What sound/light/vibration/acceleration are babies experiencing on retrievals?
Jasmine Antoine	Mark Davies, Garry Inglis	Bacterial colonisation of endotracheal tube (ETT) in infants less than 32 weeks gestation
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
Kristin O'Connor	Mark Davies	Determining the criteria for predicting successful extubation with systemic dexamethasone in premature infants
Gill Noreiks	Melissa Lai, Mark Davies	HUMIDITY – Incubator humidity for 1 or 2 weeks for ELBW babies
Mark Davies	Deborah Gilmour	NeoSTRESS: Study of Transfer and Retrieval Environmental StressorS upon neonates via a smartphone application – ACCELERATION/VIBRATION, LIGHT & SOUND
Tim Donovan	Paul Colditz	PEACH: Long-term Outcome of Neonatal Adiposity
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	Pasteurised Donor Human Milk in late preterm and term infants: A Randomised Controlled Trial
Nu Nu Lwin	Melissa Lai, Mark Davies	Very preterm infants and ELBW outcomes in a tertiary nursery
Stefanie Rutz	Melissa Lai, Kate Cogill, Mark Davies	Optimising term LBW infants' discharge home – RCT
Adam Hoellering		Retrospective review of IVH in a tertiary nursery
Misty Curry	Melissa Lai, Mark Davies, Donna Bostock, Colette McIntyre	Improving Maternal BM supply for preterm infants
Pieter Koorts	Suzanne Parker, Melissa Lai, Jason Roberts	Establishing an effective treatment of Sedation for Neonates requiring life-saving Tracheal Intubation (SoNaTIna Study)
Jany Pienaar	Mark Davies	Retrospective review of HFOV and CO2 levels in a tertiary nursery

## Collaborative Research Activity involving RBWH Research Group / Department

Collaborative Led Researchers	RBWH Researchers and Others <i>(RBWH staff in bold)</i>	Research Project Title
Julie Wixey, Jany Pienaar, Paul Colditz, Ian Wright	Jany Pienaar, Melissa Lai	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
Anndrea Flint	Mark Davies	Determining reference ranges for well term neonates 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, Deanne August	Colette McIntyre, Katie Foxcroft, Linda Cobbald, Gill Lack	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

## Collaborative Research Activity involving RBWH Research Group / Department *(cont)*

Collaborative Led Researchers	RBWH Researchers and Others <i>(RBWH staff in bold)</i>	Research Project Title
Elsa Wynd	<b>Melissa Lai, Adam Hoellering</b>	AIM-PREM: Assessing the Impact of Prematurity on Renal Medulla development
Paul Dawson	<b>Pieter Koorts, Paul Colditz</b> , Nadia Badawi, Roslyn Boyd, Vicki Flenady, Elizabeth Hurriion, Francis Bowling, Sailesh Kumar	Neuroprotective role of sulphate among preterm babies (SuPreme Study)
Iona Novak	<b>Paul Colditz</b>	RCT – GAME: Harnessing Neuroplasticity to Improve Motor Performance in Infants with Cerebral Palsy: a Pragmatic Randomized Controlled Trial
Helen Liley	<b>Paul Colditz</b>	RCT – PAEAN -Preventing Adverse Outcomes of Neonatal Hypoxic Ischaemic Encephalopathy with Erythropoietin: A Phase III Randomised Placebo Controlled Multicentre Clinical Trial
Roslyn Boyd	<b>Paul Colditz</b>	RCT – REACH: Randomised trial of Rehabilitation very EARly in Congenital Hemiplegia
Alicia Spittle	<b>Pieter Koorts, Melissa Lai</b>	Early identification of infants with cerebral palsy: implementation of evidence-based guidelines into practice

## Research Awards and Achievements

Recipient <i>(RBWH staff in bold)</i>	Award	Event
<b>Mark Davies</b>	Research Coordinator Grant	

## Research Grants

Investigators <i>(RBWH staff in bold)</i>	RBWH Research Groups /Departments	Project Title	Granting Body	Total of funds awarded	Funds used in 2019	Years
Gill Noreiks	Grantly Stable Neonatal Unit	HUMIDITY – Incubator humidity for 1 or 2 weeks for ELBW babies	RBWH Foundation	\$40,000	\$30,000	2019-2020

## 2019 Research Publications

### Journal Articles

- August DL**, Kandasamy Y, Ray R, Lindsay D and New K. Fresh perspectives on hospital-acquired neonatal skin injury prevalence from a multicentre study: length of stay, acuity and incomplete course of antenatal steroids. *Journal of Perinatology*, 2019 (Under review)
- August DL**, Hitchcock I, Tangney J, Ray R, Kandasamy Y, and New K. Graduated colour tape measure: Development and demonstration in a case series of neonatal skin injuries. *Journal of Tissue Viability*, 2019; 28(3)133-138
- August DL**, van der Vis K, and New K. Conceptualising skin development diagrammatically from foetal and neonatal scientific evidence. *Journal of Neonatal Nursing* Accepted 3 July 2019; In print
- Gilmor D**, Duong K, Gilmore I, **Davies M**; NeoSTRESS: Study of Transfer and Retrieval Environmental StressorS Upon Neonates via a Smartphone Application–Light. *Air Medical Journal* 2019; *Article in Press*
- 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. *Acta Obstet Gynecol Scand*. 2019 Feb;98(2):196-204. doi: 10.1111/aogs.13486. Epub 2018 Nov 15
- Eley VA, Chin A, Sekar R, **Donovan T**, Krepska A, Lawrence M, Bell S, Ralfe K, McGrath S, Webb L, Robinson A, van Zundert A, Marquart L. Increasing body mass index and abdominal subcutaneous fat thickness are associated with increased skin-to-epidural space distance in pregnant women. *Int J Obstet Anesth*. 2019 May; 38:59-65. doi: 10.1016/j.ijoa.2018.10.005. Epub 2018 Oct 19
- Al-Theyab NA, **Donovan TJ**, Eiby YA, Colditz PB, Lingwood BE. (2019) Fat trajectory after birth in very preterm infants mimics healthy term infants. *Pediatric Obesity*, 14 3: e12472. doi:10.1111/ijpo.12472
- Davies MW**, Pearson C. (2019) Coroner's report on the death of a baby from complications of herpes simplex virus type 1 infection. *Journal of Paediatrics and Child Health*, 55 2: 239-239. doi:10.1111/jpc.14350.

## 2019 Conference Presentations – Invited Speaker, Oral and Poster

### Invited Speakers

- McIntyre C, August DL**. What's growing on me? A case series review of moisture blisters. Council of International Neonatal Nurses Conference in Auckland NZ; 2019 5-8 May

### Invited Speakers (cont)

2. **McIntyre C**, Stone K. Butterfly meets hummingbird: An end of life collaboration. Council of International Neonatal Nurses Conference in Auckland NZ; 2019 5-8 May
3. **August DL**. Neonatal Skin and Pressure Injury Study: Language, Frequency, Emerging Themes. Council of International Neonatal Nurses Conference in Auckland NZ; 2019 5-8 May.

### Oral Presentations

1. Ratnasingham A, **Donovan T**, Eiby Y, Dekker Nitert M, **Lingwood B**. Infant body composition predicts childhood obesity. In: Proceedings of the 33<sup>rd</sup> Annual Meeting, Fetal and Neonatal Workshop of Australia and New Zealand; 2019 15-16 March; Gold Coast
2. **August, DL, Cobbald L, Lack G, McIntyre C**, New K, **Smith P**, Takashima M, **Koorts P, Foxcroft K**, Marsh N, Ullman A. Neonatal Observation Vascular Access (NOVA) An Australian Audit. In: Proceedings of the 3<sup>rd</sup> Joint European Neonatal Societies; Maastricht Netherlands; September 2019
3. Lingwood BE, Eiby YA, Al-Theyab N, Colditz PB, **Donovan TJ**. Predictors of adiposity in very preterm infants before term corrected age. In: Proceedings of the Fetal and Neonatal Physiology Society, Marysville, Australia; 2019 16-19 October
4. Ratnasingham A, **Donovan TJ**, Eiby YA, Dekker Nitert M, Lingwood BE. Infant body composition predicts childhood obesity. In: Proceedings of the 11<sup>th</sup> DoHAD World Congress, Melbourne, Australia; 2019 20-23 October.

### Poster Presentations

1. **August DL**. Guideline to Cot-side: Translating Skin Care Evidence into Clinical Practice. In: Proceedings of the Council of International Neonatal Nurses Conference in Auckland NZ; 2019 5-8 May
2. **August DL**. Bringing Attention to MRSI: Reducing the Risk in Neonates. In: Proceedings of the Council of International Neonatal Nurses Conference in Auckland NZ; 2019 5-8 May
3. Berkhout A, Kapoor V, Heney C, Jones C, Clark JE, Vaska, V, **Lai M**, Nourse C. Neonatal Herpes Simplex Infection Rates in Queensland Above National Average. In: Proceedings of the 28<sup>th</sup> Annual RBWH Healthcare Symposium. September 2019
4. Cobbald L, **Lack G, McIntyre C, August D**, New K, **Smith P**, Takashima M, **Koorts P, Foxcroft K**, Marsh N, Ullman A. Difficult intravascular access (DIVA) in neonates: two case reports. In: Proceedings of the 28<sup>th</sup> Annual RBWH Healthcare Symposium. September 2019
5. **Cogill K, Palmer-Field K**, Clarke S and Escott C. A neonatal nurse, lactation consultant and speech pathologist walk into a room. A collaborative approach to feeding in Special Care Nursery. In Proceedings from the 2019 Australian and New Zealand Neonatal Network (ANZNN) Clinical Practice Improvement (CPI) Conference; September 2019
6. **Cogill K and Taylor K**. Introduction of a Neonatal Nurse Clinic to support transition to home. In Proceedings from the 2019 Australian and New Zealand Neonatal Network (ANZNN) Clinical Practice Improvement (CPI) Conference; September 2019
7. **Lai M, McIntyre C, White K, Hose K, College M, Argyros S, McLaughlin L, Powell J, Sharpe J, and Inglis G**. A Round Around the Board: Optimising QI Communication In: Proceedings of the 2019 Australian and New Zealand Neonatal Network (ANZNN) Clinical Practice Improvement (CPI) Conference; September 2019
8. **McIntyre C, Bostock D, Lai M, Conderm K, Palmerfield K, Hose K, McLaughlin L, Koorts P, Davies M, Hollering A, White K, Sharpe J, Donovan T**, and Inglis G. A Standardised Feeding Regimen for LBWBs: Does it make a difference? In: Proceedings of the 2019 Australian and New Zealand Neonatal Network (ANZNN) Clinical Practice Improvement (CPI) Conference; September 2019
9. **McIntyre C and August D**. Mind the Gap! Best Practice for Bi-Nasal CPAP in ELBW and Severe IUGR: A Case Report In: Proceedings of the 2019 Australian and New Zealand Neonatal Network (ANZNN) Clinical Practice Improvement (CPI) Conference; September 2019.



**Back row (L-R):** Lisa McKeown, Deanne August, Linda Cobbald, , Colette McIntyre, Cathy Rowe, Karen New, Kate Cogill, Gill Noreiks  
**Front row (L-R):** A/Prof Tim Donovan, Katie Foxcroft, , Dr Pieter Koorts, Mel Lai

# OBSTETRICS & 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 progressive in the enhancement of research activities in the area of antenatal care, general obstetrics and gynaecology.

There has been extensive specific ongoing research into endometriosis under the guidance of Dr Akwasi Amoako (Conjoint O & G Specialist UQ and RBWH) and Dr. Keisuke Tanaka with a current application underway for federal funding of a \$9million grant to expand the current research into endometriosis.

The Maternal Fetal Medicine unit has been very proactive in fostering an environment conducive to prospective and retrospective research and audits as well as partnering with centres in both Australia and New Zealand to develop collaborative research. This includes the international STRIDER trial which has come to completion.

The Paediatric and Adolescent Gynaecology Statewide Service is active in research and presents and publishes internationally. 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. He was awarded for the best presentation at the 28<sup>th</sup> National Conference in Incontinence.



**Left to Right:** Dr Kellie Tathem, Dr Matthew Smith, Dr David friend, Dr Tapasi Bagchi, Dr Matthew McNoulty, Dr Thangeswaran Rudra, Dr Akram Khalil



# OBSTETRICS & GYNAECOLOGY (CONT)

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 "Fertility" research theme at UQCCR and an Associate Editor for the Australian and New Zealand Journal of O&G. His role as a co-investigator on a unique large-scale genome-wide association study investigating genetic associations with miscarriage is also ongoing. 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. Additionally, a major objective of this research is to develop novel and less invasive approaches for female fertility preservation. This is particularly relevant to women of reproductive age who have survived cancer and wish to achieve a 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). The world standard techniques established by Professor Homer and as recognised internationally in 2018 in "Nature Communications" continue as the basis of the ongoing research into oncofertility.

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

## Supervised Post-Graduate Research Students

Name <small>(RBWH staff in bold)</small>	Current Studies <small>(e.g. PhD, Masters etc.)</small> University <small>(duration)</small>	Research Project Title	Supervisors <small>(RBWH staff in bold)</small>
Ameer Alhusuny	PhD (UQ) (2016-2020)	Neck/Shoulder and Vision Problems in Surgeons Performing Minimally Invasive Surgeries	Venerina Johnston, Margaret Cook, <b>Akram Khalil</b>
Goutham Subramanian	PhD, UQ (2016-2019)	Role of DNA damage response proteins in oocyte development	<b>Hayden Homer</b> , Kum Kum Khanna
Jessica Greaney	PhD, UQ (2017-2020)	Asymmetric cell division in mammalian oocytes	<b>Hayden Homer</b> , Carlos Salomon-Gallo
Juvita DeLancy	PhD, UQ (2017-2019)	Sirtuin regulation of oocyte quality in obesity and during ageing	<b>Hayden Homer</b> , Carlos Salomon-Gallo
Sara Pagliarani	PhD, UQ (2018-2020)	Chlamydia infection in the ovary: effects on fertility in female koalas	Chiari Palmieri, Steve Johnston, <b>Hayden Homer</b>
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, <b>Gregory Duncombe</b> , Martha Lappas
Grace Boyd	MPhil, UQ	Maternal, obstetric and perinatal outcomes of pregnancies complicated by socio-demographic medical, surgical or intapartum risk factors	<b>Silesh Kumar</b> , <b>Gregory Duncombe</b>

## RBWH Research Staff with research roles, positions or appointments: e.g. Coordinators, Fellow, Adjunct and Honorary appointments

Name <small>(RBWH Staff in bold)</small>	Type of Position	Research Program	Affiliated University/ies
<b>Hayden Homer</b>	Christopher Chen Chair of Reproductive Medicine	Oocyte Biology Research Laboratory, UQCCR, Faculty of Medicine	University of Qld
<b>Karin Lust</b>	Associate Professor	Faculty of Medicine	University of Qld
<b>Rebecca Kimble</b>	Associate Professor	Faculty of Medicine UQ	University of Qld
	Adjunct Associate Professor	Faculty of Health Science QUT	Queensland University of Technology
<b>Akwasi Amoako</b>	Doctor	Faculty of Medicine	University of Qld
<b>Christopher Maher</b>	Professor	Faculty of Medicine	University of Qld
<b>Gregory Duncombe</b>	Associate Professor	Faculty of Medicine	University of Qld
<b>Katie Foxcroft</b>	Adjunct Fellow / Clinical Trial Coordinator	WNS and Perinatal Research Centre, My Baby Moves, PINC, LEAP	University of Qld

## RBWH Research Staff with research roles, positions or appointments e.g. Coordinators, etc (cont)

Name <i>(RBWH Staff in bold)</i>	Type of Position	Research Program	Affiliated University/ies
<b>Annelise Kirkham</b>	Research Nurse	My Baby Moves, Prostaglandin Inpatient iNduction of labour Compared with BALLOon Outpatient iNduction of labour: a randomised controlled trial (PINC)INC	
<b>Emma Shipton</b>	Research Nurse	Lactoferrin Evaluation in Anaemia in Pregnancy: LEAP-Should we treat iron deficiency anaemia of pregnancy with lactoferrin? A randomised controlled trial HREC/14/HNE/294 (LEAP)	
<b>Felicity Stalley</b>	Research Nurse	LEAP - Lactoferrin Evaluation in Anaemia in Pregnancy: LEAP-Should we treat iron deficiency anaemia of pregnancy with lactoferrin? A randomised controlled trial HREC/14/HNE/294 (LEAP)	

## Current RBWH Research Group / Department Led Research Activity

RBWH Research Group / Department Led Researchers <i>(RBWH staff in bold)</i>	Collaborative Researchers and Others <i>(RBWH staff in bold)</i>	Research Project Title
<b>Akwasi Amoako, Keisuke Tanaka, Akram Khalil, David Baartz, Matthew Smith</b>	Grant Montgomery ( <i>IMB, UQ</i> ), Brett Mckinnon ( <i>IMB, UQ</i> ), Sally Mortlock ( <i>IMB, UQ</i> ), Joanna Crawford ( <i>IMB, UQ</i> )	Endocannabinoid Signalling in Endometriosis-Associated Pain: A potential Therapeutic Target
<b>Akwasi Amoako, Keisuke Tanaka, Akram Khalil, David Baartz, Matthew Smith</b>	Grant Montgomery ( <i>IMB, UQ</i> ), Brett Mckinnon ( <i>IMB, UQ</i> ), Sally Mortlock ( <i>IMB, UQ</i> ), Joanna Crawford ( <i>IMB, UQ</i> )	Somatic mutation in endometriotic lesions and their relationship to disease progression, severity and symptoms
<b>Keisuke Tanaka, Akram Khalil, David Baartz, Akwasi Amoako, Renuka Sekar</b>	Emma Ballard, Elise Coghill	Management of caesarean scar pregnancy with high dose intravenous methotrexate infusion therapy: 10-year experience at a single tertiary centre
<b>Akwasi Amoako, Renuka Sekar, Christoph Lehner</b>	<b>Cathy Liu, Nicole Po,</b> Anh D Nguyen	Prediction and Prevention of preterm labour
<b>Keisuke Tanaka, Akram Khalil, David Baartz, Akwasi Amoako</b>	<b>Stephanie Zhu</b>	Comparing Surgical and Medical Management of Tubo-Ovarian Abscess: A Retrospective Single Tertiary Centre Study
<b>Akwasi Amoako, Christoph Lehner, Shannyn Rosser</b>	Thomas Yeung	Comparison of maternal and fetal/neonatal outcomes for women undergoing water birth compared to land birth
<b>Akwasi Amoako, Renuka Sekar, Christoph Lehner, Shannyn Rosser</b>	Geraldine Herweijer	Accuracy of fetal biometry, particularly estimated fetal head circumference in third trimester ultrasound: A retrospective cohort study
<b>Akram Khalil, David Baartz, Akwasi Amoako</b>	Pathmila Navaratne	Management of Tubal ectopic pregnancy with intravenous Methotrexate
<b>Keisuke Tanaka, Akram Khalil, David Baartz, Akwasi Amoako</b>	Kath Adams	Management and Outcomes of Ovarian Torsion: A Retrospective Analysis

## Collaborative Research Activity involving RBWH Research Group / Department

Collaborative Led Researchers	RBWH Researchers and Others <i>(RBWH staff in bold)</i>	Research Project Title
Grant Montgomery ( <i>IMB, UQ</i> ), Brett Mckinnon ( <i>IMB, UQ</i> ), Sally Mortlock ( <i>IMB, UQ</i> ), Joanna Crawford ( <i>IMB, UQ</i> )	<b>Akwasi Amoako, Keisuke Tanaka, Akram Khalil, David Baartz, Matthew Smith</b>	Genetics of Reproductive Disorders – Functional Consequences of Genetic Variations in Endometriosis
Murray D Mitchell ( <i>QUT</i> ), Hassendrini N Peiris ( <i>QUT</i> ), Olivia Holland ( <i>QUT</i> )	Fatema B Almughlli, Yong Q Koh, Kanchan Vaswani, <b>Keisuke Tanaka, Christoph Lehner, Renuka Sekar, Akwasi A Amoako, Sailesh Kumar</b>	Identification of true preterm labour-uses of eicosanoids and exosomes as biomarkers
Grant Montgomery ( <i>IMB, UQ</i> ), Brett Mckinnon ( <i>IMB, UQ</i> ), Sally Mortlock ( <i>IMB, UQ</i> ), Joanna Crawford ( <i>IMB, UQ</i> )	<b>Akwasi Amoako, Keisuke Tanaka, Akram Khalil, David Baartz, Matthew Smith</b>	Progesterone and Immune induced transcriptomic changes in endometrial stromal fibroblasts, their contribution in endometriosis pathogenesis and potential for targeted treatment
Mike Beckmann	<b>Karen Baker</b>	Prostaglandin Inpatient iNduction of labour Compared with BALLOon Outpatient iNduction of labour: a randomised controlled trial

## Collaborative Research Activity involving RBWH Research Group / Department *(cont)*

Collaborative Led Researchers	RBWH Researchers and Others <i>(RBWH staff in bold)</i>	Research Project Title
Vicky Flenady	<b>Yogesh Chada</b>	My Baby's Movements: a stepped wedge cluster randomised controlled trial to raise maternal awareness of fetal movements during pregnancy
Katie Groom	<b>Renuka Sekar/ Pieter Koorts</b>	Childhood Outcomes of STRIDER NZAus: a randomised controlled trial of sildenafil therapy in dismal prognosis early-onset intrauterine growth restriction (New Zealand and Australia)
Tarnow-Mordi, W et al <i>(University of Sydney)</i>	<b>Karen Baker</b>	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
Jodie Painter <i>(QIMR)</i> , Cecelia Lindgren <i>(Oxford)</i>	<b>Hayden Homer</b>	Large-scale genome-wide analyses to investigate the genetic aetiology of miscarriage (NHMRC funded)
Venerina Johnston, Margaret Cook, Ameer Alhusuny	<b>Akram Khalil</b>	Neck/Shoulder and Vision Problems in Surgeons Performing Minimally Invasive Surgeries

## Research Awards and Achievements

Recipient <i>(RBWH staff in bold)</i>	Award	Event
Cathy Lui	Dr Stephen Morrison Early Clinical Research Award	28 <sup>th</sup> Annual RBWH Healthcare Symposium
Chris Maher	Best Presentation	28 <sup>th</sup> National Conference on Incontinence

## Research Grants

Investigators <i>(RBWH staff in bold)</i>	RBWH Research Groups / Departments	Project Title	Granting Body	Total of funds awarded	Funds used in 2019	Years
<b>Akwasi Amoako</b> , Grant Montgomery, <b>Akram Khalil</b> , <b>Keisuke Tanaka</b>	Endometriosis Collaborative Research Group	Somatic mutation in endometriotic lesions and their relationship to disease progression, severity and symptoms	Metro North Collaborative Research Grant	\$47,625	\$47,625	2019
Jessica Greaney <b>Prof Hayden Homer</b>	WNS RBWH – Oocyte Biology Research Lab	Asymmetric division in mammalian oocytes	Australian Government RTP Scholarship	\$56,000	\$28,000	2018-2019
Jodie Painter <i>(QIMR)</i> , Cecelia Lindgren <i>(Oxford)</i> , <b>Prof Hayden Homer</b>	WNS RBWH – Oocyte Biology Research Lab	Large-scale genome-wide analyses to investigate the genetic aetiology of miscarriage	NHMRC	\$195,328.00	\$97,664	2018-2019
<b>Prof Hayden Homer</b> , David Sinclair, Lindsay Wu	Oocyte Biology Research Lab UQCCR/Laboratory for Ageing, UNSW	Nicotinamide adenine dinucleotide (NAD+) raising agents for improving oocyte quality	NHMRC	\$445,827	\$98,758	2017-2020

## 2019 Research Publications

### Journal Articles

1. 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. *Acta Obstet Gynecol Scand*. 2019 Feb;98(2):196-204. doi: 10.1111/aogs.13486. Epub 2018 Nov 15
2. **Homer HA**. Preimplantation genetic testing for aneuploidy (PGT-A): The biology, the technology and the clinical outcomes. *Aust N Z J Obstet Gynaecol*. 2019 Apr;59(2):317-324. doi: 10.1111/ajo.12960. Epub 2019 Feb 27
3. **Tanaka K**, Mayne L, **Khalil A**, **Baartz D**, Eriksson L, Mortlock SA, Montgomery G, McKinnon B, **Amoako AA**. Endocannabinoid System: A potential Therapeutic Target for Endometriosis. *Eur J Obstet Gynecol Reprod Biol*. 2019 *(In press)*
4. **Liu CZ**, **Ho N**, Nguyen AD, **Lehner C**, **Renuka R**, **Amoako AA** (2019). The Risk of Preterm Delivery and Pregnancy Outcomes in Women with Asymptomatic Short Cervix: A Retrospective Cohort Study. *J Matern Fetal Neonatal Med (In press)* DOI:10.1080/14767058.2019.1647163

## Journal Articles (cont)

5. **Tanaka K**, Coghil E, Ballard E, **Sekar R**, **Amoako AA**, **Khalil A** and **Baartz D** (2019) Management of caesarean scar pregnancy with high dose intravenous methotrexate infusion therapy: 10-year experience at a single tertiary centre. *Eur J Obstet Gynecol Reprod Biol.* 2019 Apr 9; 237:28-32. doi: 10.1016/j.ejogrb.2019.04.008
6. Nguyen AD, **Liu CZ**, **Lehner C**, **Amoako AA** and **Sekar R** (2019) The efficacy of quantitative fetal fibronectin in predicting spontaneous preterm birth in symptomatic women: A retrospective cohort study. *Australian and New Zealand Journal of Obstetrics and Gynaecology.* doi:10.1111/ajo.12947
7. **Liu C**, Lodge J, Flatley C, Gooi A, Ward C, Eagleson K, **Kumar S** (2018) Obstetric and perinatal outcomes in pregnancies with isolated foetal congenital heart abnormalities, *J Matern Fetal Neonatal Med.* 2019 Sep;32(18):2985-2992. doi: 10.1080/14767058.2018.1453799. Epub 2018 Apr 3
8. **Ho N**, **Liu C**, Nguyen AD, **Lehner C**, **Amoako A**, **Renuka R**. Prediction of Time of Delivery using Cervical Length Measurement in Women with Threatened Preterm Labour. *J Matern Fetal Neonatal Med.* 2019. doi:10.1080/14767058.2019.1670798
9. **Tanaka K**, **Amoako A**, Gray K, and **Baartz D** (2019) Unilateral ureteric endometriosis at the pelvic brim resulting in complete loss of renal function. *Case Reports in Obstetrics and Gynecology*, 2019 1-6. doi:10.1155/2019/9194615
10. **Ho N**, **Liu C**, Nguyen A, **Lehner C**, **Amoako A** and **Sekar R**, (2019) Prediction of time of delivery using cervical length measurement in women with threatened preterm labor. *The Journal of Maternal-Fetal & Neonatal Medicine*, doi:10.1080/14767058.2019.1670798
11. Douville, S. E., Callaway LK, **Amoako, A**, Roberts, J. and Eley, V. A. (2019) Reducing post-caesarean delivery surgical site infections: a narrative review. *International Journal of Obstetric Anesthesia*, doi: 10.1016/j.ijoa.2019.08.007
12. Alhusuny A, Cook M, **Khalil A**, Xie Y, Johnston V. Neck/Shoulder Problems and Visual Disturbances Among Surgeons: A Scoping Review. *J Surg Res.* 2019 Oct 31. pii: S0022-4804(19)30709-7. doi: 10.1016/j.jss.2019.09.064
13. Rosenfeld E B, Yurteri-Kaplan LA, **Maher C**, Bazi T, Svabik K, Houlihan S, Grimes CL. (2019) FPMRS challenges on behalf of the Collaborative Research in Pelvic Surgery Consortium (CoRPS): managing complicated cases series 4: is taking out all of a mesh sling too extreme? *International Urogynecology Journal*,. doi:10.1007/s00192-019-04172-9
14. **Maher C**. (2019) There is still a place for vaginal mesh in urogynaecology: FOR: there is still a place for vaginal mesh in urogynaecology. *BJOG: An International Journal of Obstetrics and Gynaecology*, 126 8: 1074-1074. doi:10.1111/1471-0528.15694
15. **Maher C**, Biuttini M. (2019) No vaginal estrogen therapy arm in an RCT trial on genitourinary syndrome of menopause is a concern. *Climacteric*, 22 4: 1-1. doi:10.1080/13697137.2019.1597842
16. **Tanaka K**, Eriksson L, Asher R, Obermair A. Incidence of adverse events, preventability and mortality in gynaecological hospital admissions: A systematic review and meta-analysis. *Aust N Z J Obstet Gynaecol.* 2019 Apr;59(2):195-200. doi: 10.1111/ajo.12937. Epub 2019 Jan 20
17. Leeks R, Bartley C, O'Brien B, **Bagchi T**, **Kimble RMN**. Menstrual Suppression in Pediatric and Adolescent Patients with Disabilities Ranging from Developmental to Acquired Conditions: A Population Study in an Australian Quaternary Pediatric and Adolescent Gynecology Service from January 2005 to December 2015. *J Pediatr Adolesc Gynecol.* 2019 Jun 8. pii: S1083-3188(19)30201-3. doi: 10.1016/j.jpag.2019.05.005
18. Becherel OJ, Fogel BL, Zeitlin SI, Samaratunga H, Greaney J, Homer H, Lavin MF. Disruption of Spermatogenesis and Infertility in Ataxia with Oculomotor Apraxia Type 2 (AOA2). *Cerebellum.* 2019 Jun;18(3):448-456. doi: 10.1007/s12311-019-01012-w
19. Costello MF, Garad RM, Hart R, Homer H, Johnson L, Jordan C, Mocanu E, Qiao J, Rombauts L, Teede HJ, Vanky E, Venetis CA, Ledger WL. A Review of Second- and Third-line Infertility Treatments and Supporting Evidence in Women with Polycystic Ovary Syndrome. *Med Sci (Basel).* 2019 Jun 26;7(7). pii: E75. doi: 10.3390/medsci7070075. Review
20. Gabbett MT, Laporte J, Sekar R, Nandini A, McGrath P, Sapkota Y, Jiang P, Zhang H, Burgess T, Montgomery GW, Chiu R, Fisk NM. Molecular Support for Heterogonesis Resulting in Sesquizygotic Twinning. *N Engl J Med.* 2019 Feb 28;380(9):842-849. doi: 10.1056/NEJMoa1701313
21. Groom KM, McCowan LM, Mackay LK, Lee AC, Gardener G, Unterscheider J, Sekar R, Dickinson JE, Muller P, Reid RA, Watson D, Welsh A, Marlow J, Walker SP, Hyett J, Morris J, Stone PR, Baker PN. RIDER NZAus: a multicentre randomised controlled trial of sildenafil therapy in early-onset fetal growth restriction. *BJOG.* 2019 Jul;126(8):997-1006. doi: 10.1111/1471-0528.15658. Epub 2019 Mar 14
22. Eley VA, Chin A, **Sekar R**, Donovan T, Krepska A, Lawrence M, Bell S, Ralfe K, McGrath S, Webb L, Robinson A, van Zundert A, Marquart L. Increasing body mass index and abdominal subcutaneous fat thickness are associated with increased skin-to-epidural space distance | in pregnant women. *Int J Obstet Anesth.* 2019 May; 38:59-65. doi: 10.1016/j.ijoa.2018.10.005. Epub 2018 Oct 19
23. **Maher CF**, Biuttini .M (2019) No vaginal estrogen therapy arm in an RCT trial on genitourinary syndrome of menopause is a concern. *Climacteric*, 22 4: 1-1. doi:10.1080/13697137.2019.1597842
24. Haylen BT, Lee JKS, Sivagnanam V, **Maher CF**. Total tape ban: Not the answer! *Neurourol Urodyn.* 2018 Aug;37(6):2035-2037. doi: 10.1002/nau.23794
25. Jauniaux E, Ayres-de-Campos D, Langhoff-Roos J, Fox KA, Collins S; FIGO Placenta Accreta Diagnosis and Management Expert Consensus Panel. FIGO classification for the clinical diagnosis of placenta accreta spectrum disorders. *Int J Gynaecol Obstet.* 2019 Jul;146(1):20-24. doi: 10.1002/ijgo.12761
26. Costello M, Garad R, Hart R, **Homer H**, Johnson L, Jordan C, Mocanu E, Qiao J, Rombauts L, Teede HJ, Vanky E, Venetis C, Ledger W. A Review of First Line Infertility Treatments and Supporting Evidence in Women with Polycystic Ovary Syndrome. *Med Sci (Basel).* 2019 Sep 10;7(9). pii: E95. doi: 10.3390/medsci7090095. Review
27. Zhou C, Hancock JL, Khanna KK and **Homer H**. (2019) First meiotic anaphase requires Cep55-dependent inhibitory cyclin-dependent kinase 1 phosphorylation. *Journal of Cell Science*, 132 18: jcs233379. doi:10.1242/jcs.233379
28. **Tanaka K**, Mayne L, **Khalil A**, **Baartz D**, Eriksson L, Mortlock SA, Montgomery G, McKinnon B, **Amoako AA**. The role of the Endocannabinoid System in aetiopathogenesis of endometriosis: A potential Therapeutic Target. *Eur J Obstet Gynecol Reprod Biol.* 2019 Nov 15; 244:87-94. doi: 10.1016/j.ejogrb.2019.11.012. [Epub ahead of print] Review.

## 2019 Conference Presentations – Invited Speaker, Oral and Poster

### Invited Speakers

1. **Maher C.** Credentialing in gynaecology. RANZCOG Queensland/New South Wales/ Provincial Fellows Regional Scientific Meeting, June 2019
2. **Baartz D.** Gestational trophoblastic disease. RANZCOG Queensland/New South Wales/ Provincial Fellows Regional Scientific Meeting, June 2019
3. **Tanaka K.** Caesarean scar pregnancy: Quick overview of management options and intravenous methotrexate infusion therapy at the Royal Brisbane and Women's Hospital. RANZCOG Queensland/New South Wales/Provincial Fellows Regional Scientific Meeting, June 2019
4. **Hayden Homer:** Reproductive biology, preconception care, and fertility services in the public sector. In: Proceedings of the 28<sup>th</sup> Annual RBWH Healthcare Symposium, Brisbane, September 2019
5. **Akwasi Amoako:** "The Human Sperm Apocalypse: Have We Reached a Crucial 'Tipping Point'?" In: Proceedings of the 28<sup>th</sup> Annual RBWH Healthcare Symposium, Brisbane, September 2019.

### Oral Presentations

1. Alhusuny A, Cook M, **Khalil A**, Johnston V: Neck/Shoulder and Vision Problems in Surgical Team Performing Minimally Invasive Surgeries. In Proceedings of the 20<sup>th</sup> Congress International Ergonomics Association; Florence Italy; 31 August -1 September 2018
2. **Liu CZ, Ho N**, Nguyen AD, **Lehner C, Renuka R, Amoako AA:** The Association between Gestational Age at Diagnosis of Asymptomatic Cervical Shortening and Risk of Preterm Birth. In: Proceedings of the 28<sup>th</sup> Annual RBWH Healthcare Symposium, Brisbane, September 2019
3. **Pathmanathan U**, Wilkinson R, **Amoako A, Rudra T.** Is Routine Kleihauer-Betke Test Useful Tool in the Management of Women with Decreased Foetal Movements? In: Proceedings of the 28<sup>th</sup> Annual RBWH Healthcare Symposium, Brisbane, September 2019.

### Poster Presentations

4. Vaswani K, Almughlilq FB, Koh YQ, Peiris HN, **Sekar R, Amoako AA, Kumar S**, Mitchell MD. The Effect of Interleukin 1 Beta on Eicosanoid Enzyme Gene Expression in Endometrium and Trophoblast Cells in a Co-Culture Model. In: Proceedings of the 66<sup>th</sup> Annual Scientific Meeting of the Society for Reproductive Investigation, "From Innovation to Impact" Paris, France, March 12 - 16, 2019. Reproductive Sciences. 2019; 26, 199A-200A
5. Peiris HN, Vaswani K, Almughlilq FB, Koh YQ, **Sekar R, Amoako AA, Kumar S**, Mitchell MD. Effect of 2-Arachidonoylglycerol on the Production of Prostaglandin E2 by Human Amnion Explants. In: Proceedings of the 66<sup>th</sup> Annual Scientific Meeting of the Society for Reproductive Investigation, "From Innovation to Impact" Paris, France, March 12-16, 2019. Reproductive Sciences. 2019; 26, 210A-211A
6. Almughlilq FB, Koh YQ, Peiris HN, Vaswani K, **Sekar R, Amoako AA, Kumar S**, Mitchell MD. Chronic Maternal/Fetal Inflammation Differentially Regulates Eicosanoid Enzyme Gene Expression in Endometrium and Trophoblast. In: Proceedings of the 66<sup>th</sup> Annual Scientific Meeting of the Society for Reproductive Investigation, "From Innovation to Impact" Paris, France, March 12 - 16, 2019. Reproductive Sciences. 2019; 26, 301A-301A
7. Almughlilq FB, Koh YQ, Peiris HN, Vaswani K, **Sekar R, Amoako AA, Kumar S**, Mitchell MD. Eicosanoid Enzyme Gene Expression Profiling in an In Vitro Co-Culture Model of Maternal-Fetal Communication. In: Proceedings of the 66<sup>th</sup> Annual Scientific Meeting of the Society for Reproductive Investigation, "From Innovation to Impact" Paris, France, March 12 - 16, 2019. Reproductive Sciences. 2019;26, 377A-378A
8. **Rudra T, Pathmanathan U, Amoako AA.** Absent Foetal Movements in Third Trimester – Is it a New Clinical Entity? In: Proceedings of the RCOG World Congress 2019, London, United Kingdom, June 17-19, 2019
9. **Ho N, Liu CZ**, Nguyen AD, **Lehner C, Amoako AA, Sekar R.** Prediction of Time of Delivery Using Cervical Length Measurement in Women with Threatened Preterm Labour. In: Proceedings of the RCOG World Congress 2019, London, United Kingdom, June 17-19, 2019
10. **Liu CZ, Ho N**, Nguyen AD, **Lehner C, Amoako AA, Sekar R.** Iatrogenic Late Preterm Births and Neonatal Outcomes in A Single Tertiary Centre: Retrospective Cohort Study. In: Proceedings of the RCOG World Congress 2019, London, United Kingdom, June 17-19, 2019
11. **Liu CZ, Ho N**, Nguyen AD, **Lehner C, Amoako AA, Sekar R.** The Association between Gestational Age at Diagnosis of Asymptomatic Cervical Shortening and Risk of Preterm Birth. In: Proceedings of the RCOG World Congress 2019, London, United Kingdom, June 17-19, 2019
12. **Zhu S, Tanaka K, Khalil A, Baartz D, Amoako AA:** A Retrospective Comparison of Surgical and Medical Management of Tubo-Ovarian Abscess. In: Proceedings of the RANZCOG 2019 Queensland/New South Wales/ Provincial Fellows Regional Scientific Meeting, Gold Coast, Queensland, 6-9 June 2019
13. **Tanaka K**, Petersen D, **Amoako A A, Khalil A, Baartz D.** Bowel endometriosis requiring anterior resection: 5-year experience at a single tertiary centre. In: Proceedings of the 28<sup>th</sup> Annual RBWH Healthcare Symposium. September, Brisbane, 2019
14. **Zhu S, Tanaka K, Khalil A, Baartz D, Amoako AA:** Comparing Surgical and Medical Management of Tubo-Ovarian Abscesses: A Retrospective Single Tertiary Centre Study. In: Proceedings of the 28<sup>th</sup> Annual RBWH Healthcare Symposium, Brisbane, September 2019
15. **Adams K, Tanaka K, Khalil A, Baartz D, Amoako AA:** Management and Outcomes of Ovarian Torsion: A Retrospective Analysis. In: Proceedings of the 28<sup>th</sup> Annual RBWH Healthcare Symposium, Brisbane, September 2019
16. **Liu CZ, Ho N, Lehner C, Renuka R, Amoako AA:** Association between prolonged second stage of labour and subsequent preterm birth. In: Proceedings of the 28<sup>th</sup> Annual RBWH Healthcare Symposium, Brisbane, September 2019
17. **Liu CZ, Ho N, Lehner C, Renuka R, Amoako AA:** Stage of labour at time of caesarean section delivery and subsequent preterm birth risk. In: Proceedings of the 28<sup>th</sup> Annual RBWH Healthcare Symposium, Brisbane, September 2019
18. **Ho N, Liu C, Lehner C, Amoako A, Sekar R.** How does time of the first spontaneous vaginal delivery influence subsequent preterm birth? In: Proceedings of the 28<sup>th</sup> Annual RBWH Healthcare Symposium; Herston; September 2019
19. **Ho N, Liu CZ, Lehner C, Renuka R, Amoako AA:** The risk of subsequent spontaneous preterm birth in term induction of labour. In: Proceedings of the 28<sup>th</sup> Annual RBWH Healthcare Symposium, Brisbane, September 2019

## Poster Presentations (cont)

20. **Ho N, Liu CZ, Nguyen AD, Lehner C, Renuka R, Amoako AA:** Prediction of Time of Delivery Using Cervical Length Measurement in Women with Threatened Preterm Labour. In: Proceedings of the 28<sup>th</sup> Annual RBWH Healthcare Symposium, Brisbane, September 2019
21. **Ho N, Liu CZ, Lehner C, Renuka R, Amoako AA:** Does the gestational age of the first spontaneous vaginal delivery influence the risk of subsequent preterm birth. In: Proceedings of the 28<sup>th</sup> Annual RBWH Healthcare Symposium. September 2019
22. **Chui M, Sahu A, Lah D, Rudra T:** Obstetrics outcome following instrumental delivery in theatre. In: Proceedings of the 28<sup>th</sup> Annual RBWH Healthcare Symposium, Brisbane, September 2019
23. **Cheer K, Gupta A, Song W, Rudra T:** managing placenta accreta spectrum disorders – are we doing it right? In: Proceedings of the 28<sup>th</sup> Annual RBWH Healthcare Symposium, Brisbane, September 2019
24. **Ho N, Artis K, Bagchi T:** Does the Use of Fetal Pillow® in Fully Dilated Caesarean Sections Improve Maternal and Fetal Outcomes? In: Proceedings of the 28<sup>th</sup> Annual RBWH Healthcare Symposium, Brisbane, September 2019
25. **Lehner C, Farquharson J, Goder Z:** Midwifery continuity of care to reduce the rate of preterm birth – a single centre experience at the Royal Brisbane and Women’s Hospital (RBWH). In: Proceedings of the 28<sup>th</sup> Annual RBWH Healthcare Symposium, Brisbane, September 2019
26. **Lehner C** for the Queensland APTBPA: The Australian Preterm Birth Prevention Alliance (APTBPA) – an initiative to reduce the rising rate of preterm births in Australia: the Queensland perspective. In: Proceedings of the 28<sup>th</sup> Annual RBWH Healthcare Symposium, Brisbane, September 2019
27. **Pathmanathan U, Wilkinson R, Amoako A, Rudra T.** Is Routine Kleihauer-Betke Test Useful Tool in the Management of Women with Decreased Foetal Movements? In: Proceedings of the 28<sup>th</sup> Annual RBWH Healthcare Symposium; Herston; September 2019
28. **Bright M, Christensen R, Klopogge, Chawla G, Sekar R, Eley V.** An audit of surgical site infections following caesarean section. In: Proceedings of the 28<sup>th</sup> Annual RBWH Healthcare Symposium; Herston; September 2019
29. **Lee J, Eley V, Wyssusek K, Kimble R, Way M, Cohen J, Van Zundert A.** Rotational Thromboelastometry (ROTEM®) Assessment of the Combined Effect of Term Pregnancy and Obesity on Coagulation in Healthy Women with Uncomplicated Pregnancies in Australia: A Prospective Observational Study. In: Proceedings of the 28<sup>th</sup> Annual RBWH Healthcare Symposium; Herston; September 2019
30. **Young T.** To evaluate the obstetric and neonatal outcomes for low risk women undergoing water immersion only during the first stage of labour compared with low risk women labouring on land In: Proceedings of the 28<sup>th</sup> Annual RBWH Healthcare Symposium; Herston; September 2019
31. **Chung P, Laporte J, Sekar R, Minuzzo L, Craven A-M:** Case Report: Delayed Diagnosis of Uterine Incarceration in a Multiparous Woman with Anuric End Stage Renal Disease. In: Proceedings of the Society of Obstetric Medicine of Australia and New Zealand, Annual Scientific Meeting, Melbourne October 11-13, 2019
32. **Tanaka K, Petersen D, Amoako AA, Khalil A, Baartz D.** Bowel endometriosis requiring anterior resection: 5-year experience at a single tertiary centre. In: Proceedings of the RANZCOG 2019 Annual Scientific Meeting, Melbourne, Victoria, 13-16 October 2019
33. **Zhu S, Tanaka K, Khalil A, Baartz D, Amoako AA:** A Retrospective Comparison of Surgical and Medical Management of Tubo-Ovarian Abscess. In: Proceedings of the RANZCOG 2019 Annual Scientific Meeting, Melbourne, Victoria, 13-16 October 2019
34. **Adams K, Tanaka K, Khalil A, Baartz D, Amoako AA:** Management and Outcomes of Ovarian Torsion: A Retrospective Analysis. In: Proceedings of the RANZCOG 2019 Annual Scientific Meeting, Melbourne, Victoria, 13-16 October 2019
35. **Liu CZ, Ho N, Lehner C, Renuka R, Amoako AA:** Prolonged second stage of labour and the risk of subsequent preterm birth: a retrospective cohort study. In: Proceedings of the RANZCOG 2019 Annual Scientific Meeting, Melbourne, Victoria, 13-16 October 2019
36. **Liu CZ, Ho N, Lehner C, Renuka R, Amoako AA:** Stage of labour at caesarean section delivery and risk of subsequent preterm birth: a retrospective cohort study. In: Proceedings of the RANZCOG 2019 Annual Scientific Meeting, Melbourne, Victoria, 13-16 October 2019
37. **Ho N, Liu CZ, Lehner C, Renuka R, Amoako AA:** Time of Spontaneous Vaginal Delivery and Subsequent Preterm Birth. In: Proceedings of the RANZCOG 2019 Annual Scientific Meeting, Melbourne, Victoria, 13-16 October 2019
38. **Ho N, Liu CZ, Lehner C, Renuka R, Amoako AA:** Does term induction of labour influence the risk of subsequent spontaneous preterm birth? In: Proceedings of the RANZCOG 2019 Annual Scientific Meeting, Melbourne, Victoria, 13-16 October 2019
39. **Ho N, Liu CZ, Nguyen AD, Lehner C, Renuka R, Amoako AA:** Prediction of Time of Delivery Using Cervical Length Measurement in Women with Threatened Preterm Labour. In: Proceedings of the RANZCOG 2019 Annual Scientific Meeting, Melbourne, Victoria, 13-16 October 2019
40. **Chung P, Cheer K, Hurst C and Rudra T.** Obstetric Outcomes in Major Praevia Compared to Minor Praevia. In: Proceedings of the RANZCOG 2019 Annual Scientific Meeting, Melbourne, Victoria, 13-16 October 2019
41. **Coates C and Sekar R.** Procedure-Related Risk of Invasive Prenatal Testing: A Retrospective Review in a Tertiary Centre. In: Proceedings of the RANZCOG 2019 Annual Scientific Meeting, Melbourne, Victoria, 13-16 October 2019
42. **Ho N, Artis K and Bagchi T.** Maternal and Fetal Outcomes Following the Use of Fetal Pillows in Fully Dilated Caesarean Section. In: Proceedings of the RANZCOG 2019 Annual Scientific Meeting, Melbourne, Victoria, 13-16 October 2019
43. **Rudra T, Sahu A, Chui M and Lah D.** Obstetric Outcome Following Trial of Instrumental Delivery in Theatre. In: Proceedings of the RANZCOG 2019 Annual Scientific Meeting, Melbourne, Victoria, 13-16 October 2019
44. **Rudra T, Pathmanathan U, Amoako A** and Wilkinson R. Is Routine Kleihauer-Betke Test Useful Tool in the Management of Women with Decreased Fetal Movements? In: Proceedings of the RANZCOG 2019 Annual Scientific Meeting, Melbourne, Victoria, 13-16 October 2019
45. **Foo A and Rudra T.** Undiagnosed Breech: Can We Do Better? In: Proceedings of the RANZCOG 2019 Annual Scientific Meeting, Melbourne, Victoria, 13-16 October 2019
46. **Chung P, Cheer K, Hurst C and Rudra T.** Placenta Praevia – Can We Do Any Better? In: Proceedings of the RANZCOG 2019 Annual Scientific Meeting, Melbourne, Victoria, 13-16 October 2019
47. **Adikari T and O'Brien B.** Presentations and Outcomes of Patients with Disorders of Sexual Development (DSD) in a Tertiary Paediatric and Adolescent Gynaecology (PAG) Service. In: Proceedings of the RANZCOG 2019 Annual Scientific Meeting, Melbourne, Victoria, 13-16 October 2019.

# OBSTETRIC MEDICINE

The department of Obstetric Medicine conducts high level research into complications of pregnancy and maternal and fetal outcomes. There are currently six staff undertaking research higher degrees within the department and a large number of research nurses involved in multiple studies. The department collaborates with other research centres across Australia to further our understanding of complex pregnancies, particularly in the field of cardiology, maternal metabolism and asthma. The department was very active at the annual Australasian scientific meeting in Obstetric Medicine this year with five oral presentations and sixteen poster presentations, one of which was awarded the 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>
<b>Alison Green</b>	PhD University of Queensland	Gestational Diabetes in General Practice	<b>Leonie Callaway</b> , David McIntyre, Ben Mitchell
<b>Naomi Achong</b>	PhD University of Queensland	Breastfeeding in Type 1 Diabetes	<b>Leonie Callaway</b> , Emma Duncan, David McIntyre
<b>Alka Kothari</b>	PhD University of Queensland	Forgotten Fathers	<b>Leonie Callaway</b> , Joel Dulhunty
<b>Helen Robinson</b>	PhD University of Queensland	Ketosis in Pregnancy	<b>Leonie Callaway</b> , Helen Barrett, Marloes Dekker
<b>Fiona Britten</b>	Master of Philosophy University of Queensland	Breastfeeding in Type 2 Diabetes	<b>Leonie Callaway</b> , Emma Duncan
<b>Emma Shipton</b>	PhD University of Queensland	Models of Care and Breastfeeding	<b>Leonie Callaway</b> , Susan de Jersey, <b>Katie Foxcroft</b>
<b>Lisa McKeown</b>	Master of Philosophy University of Queensland	Do parents of preterm infant's experience symptoms of post-traumatic stress disorder?	Vanessa Cobham, <b>Leonie Callaway</b> , <b>Katie Foxcroft</b>

## Obstetric Medicine Team



**Back row (L-R):** Emma Shipton, Katie Foxcroft, Dr Fiona Britten, Dr Penny Wolski, Dr Annabelle Lamprecht  
**Front row (L-R):** A/Prof Karin Lust, Prof Leonie Callaway, Dr Ann-Maree Craven

## RBWH Research Staff with research roles, positions or appointments: e.g. Coordinators, Fellow, Adjunct and Honorary appointments

Name <i>(RBWH Staff in bold)</i>	Type of Position	Research Program	Affiliated University/ies
<b>Prof Leonie Callaway</b>	Director of Research Women's and Newborn Services	Women's Health and the importance of the intrauterine and neonatal environment in influencing long term adult health	
	Professor of Medicine – UQ	Women's and Newborn Services/Faculty of Medicine	University of Qld
<b>Katie Foxcroft</b>	Adjunct Fellow	WNS and Perinatal Research Centre	University of Qld
<b>Annelise Kirkham</b>	Research Nurse	My Baby Moves, Neuroprotective role of sulphate among preterm babies (SuPreme Study)	
<b>Felicity Stalley</b>	Research Nurse	<b>Breathing for Life</b> – A randomised trial of fractional exhaled nitric oxide (FENO)-based management of asthma during pregnancy and its impact on perinatal outcomes and infant and childhood respiratory health <b>LEAP</b> -Lactoferrin Evaluation in Anaemia in Pregnancy: To evaluate, in a randomised controlled trial (RCT), oral bovine lactoferrin (bLF) vs iron sulphate (FeSO <sub>4</sub> ) in iron deficiency anaemia in pregnancy (IDAP), <b>Offspring</b> – <b>Offspring</b> – Do Probiotics in Pregnancy Prevent Allergic disease in Children	
<b>Lisa McKeown</b>	Research Nurse	<b>PAEAN</b> – Preventing Adverse Outcomes of Neonatal Hypoxic Ischaemic Encephalopathy with Erythropoietin <b>NEBO</b> – Neonatal Encephalopathy Brain Outcomes: Prospective study of Clinical and MRI Biomarkers in term born infants to improve accurate and earlier prediction of Cerebral Palsy <b>LIFT</b> – Lactoferrin Infant Feeding Trial	
<b>Emma Shipton</b>	Research Nurse	<b>LEAP1</b> -Lactoferrin Evaluation in Anaemia in Pregnancy: To evaluate, in a randomised controlled, trial (RCT), oral bovine lactoferrin (bLF) vs iron sulphate (FeSO <sub>4</sub> ) in iron deficiency anaemia in pregnancy (IDAP), <b>Offspring</b> – Do Probiotics in Pregnancy Prevent Allergic disease in Children	
<b>Linda Cobbald</b>	Research Nurse	<b>NOVA</b> – NeOnatal Vascular Access: an observational audit of neonatal vascular access complications	
<b>Gill Lack</b>	Research Nurse	<b>NOVA</b> – NeOnatal Vascular Access: an observational audit of neonatal vascular access complications	

## Honorary Positions: e.g. Non-RBWH staff with research appointments at RBWH

Name	Position	FTE	Research Program	Affiliated University/ies
Sarah Davidson	Honorary Research Student		The effect of using ultrasound-guided management of gestational diabetes on maternal and neonatal outcomes in pregnant women	Duke University, North Carolina

## Current RBWH Research Group / Department Led Research Activity

RBWH Research Group / Department Led Researchers <i>(RBWH staff in bold)</i>	Collaborative Researchers and Others <i>(RBWH staff in bold)</i>	Research Project Title
<b>Jeanette Tyler, Katie Foxcroft</b>		Feasibility and acceptability of web-based auditing of hospital staff and maternity patients for compliance with Baby Friendly Health Initiative (BFHI) standards
<b>Leonie Callaway, Katie Foxcroft</b>	Helen Barrett, Marloes Dekker, David McIntyre	Do Probiotics in Pregnancy Prevent Allergic Disease in Children?

## Collaborative Research Activity involving RBWH Research Group / Department

Collaborative Led Researchers	RBWH Researchers and Others <i>(RBWH staff in bold)</i>	Research Project Title
Murphy V, Gibson P, Hensley M, Mattes J, Giles W, Peek M, Bisits A, McCaffery K	<b>Callaway L, Colditz P, Barrett H</b>	Breathing for Life Trial
EURObservational research programme	<b>Lust K, Parsonage W</b>	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	<b>Lust K, Parsonage W</b>	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	<b>Lust K</b>	Links2HealthierBubs: Influenza and pertussis vaccine effectiveness in pregnancy



## Research Awards and Achievements

Recipient <i>(RBWH staff in bold)</i>	Award	Event
<b>Helen Robinson</b>	Best Scientific Poster	SOMANZ Annual Scientific Meeting 2019

## Research Grants

Investigators <i>(RBWH staff in bold)</i>	RBWH Research Groups / Departments	Project Title	Granting Body	Total of funds awarded	Funds used in 2019	Years
Simmons D, <b>Callaway L</b> , Dekker M, Ng D	Obstetric medicine	Trophoblast cell-cell fusion in preeclampsia	National Health and Medical Research Council	\$487,273	\$162,424.33	2017-2019
Murphy V, Gibson P, Hensley M, Mattes J, Giles W, Peek M, Bisits A, <b>Callaway L</b> , 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	\$1,647,906	\$28,500	2014-2019
Graves N, Hillman K, Willmott L, White B, Harvey G, <b>Callaway L</b> , Cardona-Morrell M, Barnett A, Lee X	Obstetric Medicine	Reducing Non-Beneficial Treatment at the End-of-Life	National Health and Medical Research Council Partnership Project	\$1,008,215	\$504,107.50	2018-2020
Hague W, Dodd J, Morris J, Stark M, Peek M, Middleton P, Shand A, Newnham J, <b>Callaway L</b> , Walker S	Obstetric Medicine	Treatment of Severe Early Onset Intrahepatic Cholestasis of Pregnancy	Medical Research Future Fund Research Grant	\$1,191,769	\$595,844.50	2018-2020
<b>Shipton E</b>	Obstetric Medicine	PhD models of care and Breastfeeding	RBWH Foundation	\$38,082.52	\$38,082.52	2019
Sullivan E, Cordina R, Simmons L, Pollock W, <b>Lust K</b> , 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 Cardiovascular Research Network Women and Heart Disease Grant	\$150,000	\$75,000	2017-2020
Regan AK, Andrews RM, Moore HC, Binks MJ, McHugh L, Pereira G, Blyth CC, Van Buynder PG, <b>Lust K</b>	Obstetric medicine	Links2HealthierBubs: Influenza and pertussis vaccine effectiveness in pregnancy	National Health and Medical Research Council Grant	\$676,333.20	\$16,9083.30	2017-2020
<b>Leonie Callaway, Katie Foxcroft</b> , Helen Barrett, Marloes Dekker, David McIntyre	Obstetric medicine	Do Probiotics in Pregnancy Prevent Allergic Disease in Children	RBWH Foundation	\$39,936	\$19,968	2018-2019

## 2019 Research Publications

### Journal Articles

- Brooks EK, Schweitzer D, **Robinson HL**. A Case of Paramyotonia congenita in pregnancy. *Obstetric Medicine*. Doi. org/10.1177/1753495X18816171
- Callaway LK**, McIntyre HD, Barrett HL, **Foxcroft K**, Tremellen A, Lingwood BE, Tobin JM, Wilkinson S, Kothari A, Morrison M, O'Rourke P, Pelecanos A, Dekker Nitert M. Probiotics for the Prevention of Gestational Diabetes Mellitus in Overweight and Obese Women: Findings From the SPRING Double-Blind Randomized Controlled Trial. *Diabetes Care*. 2019 Mar;42(3):364-371. doi: 10.2337/dc18-2248. Epub 2019 Jan 19
- Kilgour C**, Bogossian F, **Callaway L**, Gallois C. Experiences of women, hospital clinicians and general practitioners with gestational diabetes mellitus postnatal follow-up: A mixed methods approach. *Diabetes Res Clin Pract*. 2019 Feb; 148:32-42. doi: 10.1016/j.diabres.2018.12.005. Epub 2018 Dec 21
- Kothari A, Thayalan K, Dulhunty J, **Callaway L**. The forgotten father in obstetric medicine. *Obstet Med*. 2019 Jun;12(2):57-65. doi: 10.1177/1753495X18823479. Epub 2019 Feb 18. Review
- Schoenaker DAJM, **Callaway LK**, Mishra GD. The Role of Childhood Adversity in the Development of Gestational Diabetes. *Am J Prev Med*. 2019 Jul 20. pii: S0749-3797(19)30242-9. doi: 10.1016/j.amepre.2019.04.028. [Epub ahead of print]
- Robinson H**, Barrett H, Gomez-Arango L, McIntyre HD, Callaway L, Dekker Nitert M. Ketonuria Is Associated with Changes to the Abundance of *Roseburia* in the Gut Microbiota of Overweight and Obese Women at 16 Weeks Gestation: A Cross-Sectional Observational Study. *Nutrients*. 2019 Aug 8;11(8). pii: E1836. doi: 10.3390/nu11081836

## Journal Articles (cont)

7. Douville SE, **Callaway LK**, **Amoako A**, Roberts JA, Eley VA. Reducing post-caesarean delivery surgical site infections: a narrative review. *Int J Obstet Anesth.* 2019 Sep 5. pii: S0959-289X(19)30530-8. doi: 10.1016/j.ijoa.2019.08.007. [Epub ahead of print] Review
8. Lowe SA, Armstong G, Beech A, Bowyer L, Grzeskowiak L, Marnoch CA, **Robinson H**. SOMANZ position paper on the management of nausea and vomiting in pregnancy and hyperemesis gravidarum. *ANZJOG* Oct 2019 doi.org/10.1111/ajo.13084
9. Sarna M, Andrews R, Moore H, Binks MJ, McHugh L, Pereira GF, Blyth CC, Van Buynder P, **Lust K**, Effler P, Lambert SB, Omer SB, Mak DB, Snelling T, D'Antoine HA, McIntyre P, de Klerk N, Foo D, Regan AK. "Links2HealthierBubs" cohort study: protocol for a record linkage study on the safety, uptake and effectiveness of influenza and pertussis vaccines among pregnant Australian women. *BMJ Open.* 2019 Jun 20;9(6)
10. Rigg J, Gilbertson E, Barrett HL, **Britten FL**, **Lust K**. Primary Hyperparathyroidism in Pregnancy: Maternofetal Outcomes at a Quaternary Referral Obstetric Hospital, 2000 Through 2015. *J Clin Endocrinol Metab.* 2019 Mar 1;104(3):721-729
11. Dawson AJ, Krastev Y, Parsonage WA, Peek M, **Lust K**, Sullivan EA. Experiences of women with cardiac disease in pregnancy: a systematic review and metasynthesis. *BMJ Open.* 2019 Sep 28;9(9)
12. Schaap T, Bloemenkamp K, Deneux-Tharoux C, Knight M, Langhoff-Roos J, Sullivan E, van den Akker T; **INOSS**. Defining definitions: a Delphi study to develop a core outcome set for conditions of severe maternal morbidity. *BJOG.* 2019 Feb;126(3):394-401.
13. Carter HE, Lee XJ, Gallois C, Winch S, **Callaway L**, Willmott L, White B, Parker M, Close E, Graves N. Factors associated with non-beneficial treatments in end of life hospital admissions: a multicentre retrospective cohort study in Australia. *BMJ Open.* 2019 Nov 4;9(11):e030955. doi: 10.1136/bmjopen-2019-030955.

## 2019 Conference Presentations – Invited Speaker, Oral and Poster

### Invited Speakers

1. **Callaway L**. Compassionate Care and Mindfulness in Medicine. In: Proceedings of the New Zealand Society for the Study of Diabetes Annual Scientific Meeting, Napier New Zealand, May 7-10, 2019
2. **Callaway L**. GDM: Models of Care. In: Proceedings of the New Zealand Society for the Study of Diabetes Annual Scientific Meeting, Napier New Zealand, May 7-10, 2019
3. **Callaway L**. Insights into Birth Trauma from Obstetric Medicine. In: Proceedings of The Australian Birth Trauma Conference, Brisbane August 16, 2019
4. **Callaway L**. The consumer perspective on GDM. In: Proceedings of the Australian Diabetes in Pregnancy Society Scientific Meeting. Sydney August 23-25, 2019
5. **Callaway L**. The SPRING Study Findings. In: Proceedings of the Australian Diabetes Congress, Sydney August 23, 2019
6. **Callaway L**. Unscrambled Complement for Breakfast: Diseases of Innate Immunity in Pregnancy. In: Proceedings of the Society of Obstetric Medicine of Australia and New Zealand, Annual Scientific Meeting, Melbourne October 11-13, 2019
7. **Callaway L**. Psychosocial Issues in Obesity. In: Proceedings of the Society of Obstetric Medicine of Australia and New Zealand, Annual Scientific Meeting, Melbourne October 11-13, 2019
8. **Callaway L**. The Hidden Epidemic in Obstetric Care – and Why It Matters to Us All. In: Proceedings of the Metro North Health Forum Brisbane October 16, 2019.
9. **Callaway L**. Oops...Accidental Clinician Scientist. In: Proceedings of the Mater Inaugural Research Symposium, Brisbane October 25, 2019
10. Parsonage W. Risk stratification of pregnancy in women with heart disease. In: Proceedings of the Society of Obstetric Medicine of Australia and New Zealand, Annual Scientific Meeting, Melbourne October 11-13, 2019
11. **Lust K**. Obstetric Medicine Disorders in pregnancy, In. RANZCOG Queensland FRANZCOG Examination Preparation Course Brisbane 2019.

### Oral Presentations

1. **Callaway L**. Frank feedback – Consumers perspectives on GDM. In: Proceedings of the Australasian Diabetes in Pregnancy Society Annual Scientific Meeting, 23-25 August 2019
2. **Britten F**. Breastfeeding in Women with Type 1 and type 2 Diabetes. In: Proceedings of the Australasian Diabetes in Pregnancy Society Annual Scientific Meeting, 23-25 August 2019
3. **Jinewen He**. A case series of pregnancies in solid organ transplant recipients at the Royal Brisbane and Women's Hospital in the past 10 years. In: Proceedings of the Society of Obstetric Medicine of Australia and New Zealand, Annual Scientific Meeting, Melbourne October 11-13, 2019
4. **Fanning E**. Gestational weight loss in obese pregnant women. In: Proceedings of the Society of Obstetric Medicine of Australia and New Zealand, Annual Scientific Meeting, Melbourne October 11-13, 2019.

### Poster Presentations

1. Bright M, Chawla G, **Callaway L**, Eley VA: Anaesthetic and peripartum care and outcomes in women with extreme obesity. In: Proceedings of the Australian and New Zealand College of Anaesthetists Annual Scientific Meeting, Kuala Lumpur, April 29–May 3, 2019
2. Sweeney, A, Katikireddi, S, **Poulsen, K**: Prevalence of Antiphospholipid Antibodies in Women with Early Onset Preeclampsia in a Tertiary Centre. In: Proceedings of the Asia Pacific League of Associations for Rheumatology (APLAR) 21<sup>st</sup> Annual Scientific Meeting, Brisbane, 2019 April
3. **Nightingale, B**. A Retrospective Audit of the Efficacy of New Glycemic Targets in the Treatment of Gestational Diabetes Mellitus (GDM) in the Sunshine Coast Hospital and Health Service District (SCHHS). In: Proceedings of the Australasian Diabetes in Pregnancy Society Annual Scientific Meeting, 23-25 August 2019

## Poster Presentations (cont)

4. **Robinson, H**, Barrett H, Gomez-Arango L, McIntyre D, **Callaway L**, Dekker –Nitert M. Ketonuria is associated with changes to the abundance of Roseburia in the gut microbiota of overweight and obese women at 16 weeks gestation. In: Proceedings of the Australasian Diabetes in Pregnancy Society Annual Scientific Meeting, 23-25 August 2019
5. Green, A, **Callaway L**, Mitchell B. Diagnosing and providing initial management for patients with Gestational Diabetes: What is the General Practitioner's experience? In: Proceedings of the Australasian Diabetes in Pregnancy Society Annual Scientific Meeting, 23-25 August 2019
6. Kilgour C, Bogossian F, **Callaway L**, Gallois C. Experiences of women, hospital clinicians and general practitioners with gestational diabetes mellitus postnatal follow-up: A mixed methods approach. In: Proceedings of the 28<sup>th</sup> Annual RBWH Healthcare Symposium; Herston; September 2019
7. Powlesland H, Guthrie T, **Callaway L**, Wilkinson S, Eakin E, de Jersey S. Advertising antenatal healthy lifestyle telephone coaching service through direct text messaging increases self-referral and overall service access. In: Proceedings of the 28<sup>th</sup> Annual RBWH Healthcare Symposium; Herston; September 2019
8. Guthrie T, Powlesland H, Wilkinson S, **Callaway L**, Eakin E, de Jersey S. Staff and participant satisfaction with a dietetic-led telephone coaching program to support healthy gestational weight gain. In: Proceedings of the 28<sup>th</sup> Annual RBWH Healthcare Symposium; Herston; September 2019
9. **Britten FL, Duke M, Lee W, Lust K**. Azathioprine Toxicity in Pregnancy. In: Proceedings of the Society of Obstetric Medicine of Australia and New Zealand, Annual Scientific Meeting, Melbourne October 11-13, 2019
10. Butler-Mader R, Fassbind I, **Craven AM**. Transdermal Granisetron in the treatment of Hyperemesis Gravidarum. In: Proceedings of the Society of Obstetric Medicine of Australia and New Zealand, Annual Scientific Meeting, Melbourne October 11-13, 2019
11. **Lust KM**, Sarma M, Andrews RM, Moore HC, Binks MJ, McHugh L, Pereira G, Blyth CC, Van Buynder P, Regan A. The 'Links2HealthierBubs' Cohort Study: Protocol for a record linkage study on the safety, uptake and effectiveness of influenza and pertussis vaccines among pregnant Australian women. In: Proceedings of the Society of Obstetric Medicine of Australia and New Zealand, Annual Scientific Meeting, Melbourne October 11-13, 2019
12. **Nightingale B, Craven AM**. Cerebral venous thrombosis, a misdiagnosis with MR-venography. In: Proceedings of the Society of Obstetric Medicine of Australia and New Zealand, Annual Scientific Meeting, Melbourne October 11-13, 2019
13. **Nightingale B, Robinson H**. A mediastinal mass with sever superior vena cava compression. In: Proceedings of the Society of Obstetric Medicine of Australia and New Zealand, Annual Scientific Meeting, Melbourne October 11-13, 2019
14. **Robinson H, Dekker N, Callaway L**, Barrett H. Maternal ketones in gestational diabetes mellitus: a clinical practice survey. In: Proceedings of the Society of Obstetric Medicine of Australia and New Zealand, Annual Scientific Meeting, Melbourne October 11-13, 2019
15. **Robinson H**, Barrett H, Gomez-Arango L, McIntyre D, **Callaway L**, Dekker –Nitert M. Ketonuria is associated with changes to the abundance of Roseburia in the gut microbiota of overweight and obese women at 16 weeks gestation: a cross-sectional observational study. In: Proceedings of the Society of Obstetric Medicine of Australia and New Zealand, Annual Scientific Meeting, Melbourne October 11-13, 2019
16. **Tellam JJ, Craven AM**. Management of heparin allergy in pregnancy. In: Proceedings of the Society of Obstetric Medicine of Australia and New Zealand, Annual Scientific Meeting, Melbourne October 11-13, 2019
17. **Tellam JJ, Lust K**. Anaemia in pregnancy with an unexpected aetiology In: Proceedings of the Society of Obstetric Medicine of Australia and New Zealand, Annual Scientific Meeting, Melbourne October 11-13, 2019
18. **Chung P**, Laporte J, Sekar R, Minuzzo L, **Craven AM**. Case Report: Delayed Diagnosis of Uterine Incarceration in a Multiparous Woman with Anuric End Stage Renal Disease. In: Proceedings of the Society of Obstetric Medicine of Australia and New Zealand, Annual Scientific Meeting, Melbourne October 11-13, 2019
19. Young K, Bennett O, **Lamprecht A, Callaway L, Craven AM**. Acute Hepatitis C Infection in Pregnancy. A case report of second trimester diagnosis and term delivery. In: Proceedings of the Society of Obstetric Medicine of Australia and New Zealand, Annual Scientific Meeting, Melbourne October 11-13, 2019
20. Dekker EE, Gomez-Arango LF, **Callaway LK**, McIntyre D, Morrison M, Barrett H & Dekker Nitert M. Gut wall barrier function is impaired in women who develop pregnancy complications and is no longer associated with dietary fibre intake. Proceedings of the Society of Obstetric Medicine of Australia and New Zealand, Annual Scientific Meeting, Melbourne October 11-13, 2019
21. Barrett H, Gomez-Arango LF, McIntyre D, **Callaway LK**, Dekker Nitert M. Lower abundance of the butyrateproducer Coprococcus in the gut microbiota of women with future preeclampsia Faisal Altemani. In: Proceedings of the Society of Obstetric Medicine of Australia and New Zealand, Annual Scientific Meeting, Melbourne October 11-13, 2019
22. Tomsett K, Barrett H, **Callaway LK**, McIntyre D, Dekker Nitert M. High dietary fibre intake alters the composition of the gut microbiota in women who develop hypertensive disorders of pregnancy. In: Proceedings of the Society of Obstetric Medicine of Australia and New Zealand, Annual Scientific Meeting, Melbourne October 11-13, 2019
23. **Fanning E**, Lee W. Gestational weight loss in obese pregnant women. In: Proceedings of the Society of Obstetric Medicine of Australia and New Zealand, Annual Scientific Meeting, Melbourne October 11-13, 2019
24. Sekar P, **Wolski P**. A case of severe hyperemesis resulting in subcutaneous emphysema. In: Proceedings of the Society of Obstetric Medicine of Australia and New Zealand, Annual Scientific Meeting, Melbourne October 11-13, 2019

## Details of staff that completed their PhDs in 2019 within your department / research group

Name	Name of Project	Completed Date	Affiliated University/ies
Naomi Achong	Breastfeeding in Type 1 Diabetes	2019	University of Queensland

# 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, intrauterine growth restriction led by Dr Julie Wixey, 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.

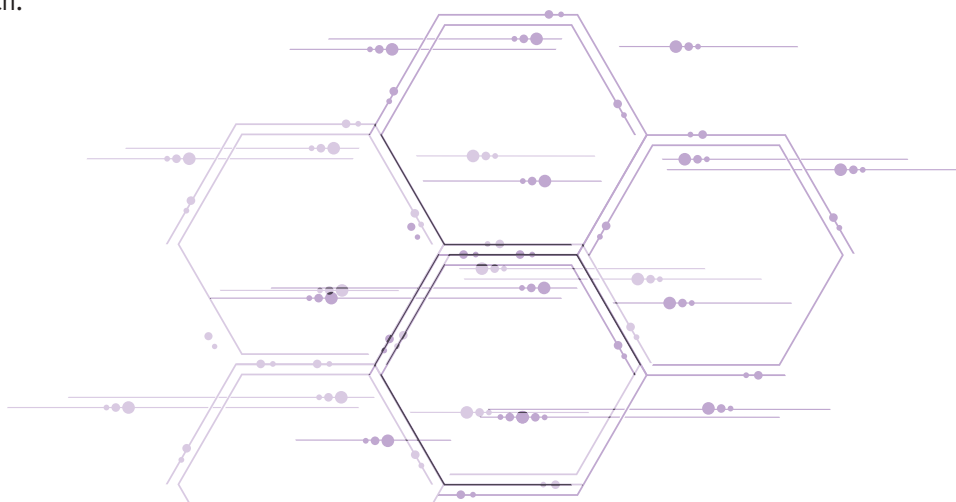
2019 has been a successful year for the Perinatal Research Centre. We were delighted for Prof Paul Colditz to be awarded Researcher of the Year at the 2019 Metro North Research Excellence Awards. We were also awarded two research grants in 2019 from RBWH. One grant led by Dr Lai and Dr Bjorkman is examining a novel treatment to reduce brain injury in newborn babies. A lack of oxygen around the time of birth results in damage to the brain (HIE) causing lifelong mental and physical disabilities including epilepsy and cerebral palsy. This pilot project will investigate a potential adjunctive therapy (fetuin) to complement hypothermia to reduce brain injury and improve neurodevelopmental outcomes.

Dr Pienaar and Dr Wixey are leading a grant examining protection of the intrauterine growth restricted (IUGR) newborn brain. IUGR can affect the developing brain resulting in poor outcomes such as intellectual impairment and cerebral palsy. No therapy exists to protect the IUGR newborn brain. The blood-brain barrier (BBB) plays a critical role in protecting the brain against the entry of toxic substances. We hypothesise the BBB is disrupted in the IUGR newborn brain and this disruption is associated with brain impairment. Further, we will assess whether ibuprofen treatment can reduce BBB disruption in the IUGR newborn brain and thus improve outcomes.

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 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. NHMRC and external sources have been instrumental in our continuing work on IUGR and HIE projects using placental stem cells as a treatment for brain injury. Data from our encouraging preliminary studies have been presented at multiple National and International conferences.

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.

Our ongoing funding is creating amazing results and media interest and we look forward to another year of high impact translational research. 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>
Ms Rebecca Caesar	PhD, UQ (2012-2019)	Early predictors for neurodevelopmental outcome and prioritisation of service delivery for at risk premature infants	Roslyn Boyd, <b>Paul Colditz</b>
Ms Elizabeth Forbes	MPhil, UQ (2013-2019) <i>Submitted 2019</i>	Changes in cardiac structure and biochemistry during transition to extra uterine life in preterm and term piglets	Yvonne Eiby, <b>Barbara Lingwood</b> , Karen Moritz
Ms Kate Goasdoue	PhD, UQ (2015-2019) <i>Awarded 2019</i>	A novel therapy for neonatal seizures	Tracey Bjorkman, Julie Wixey
Dr Luke Jardine	PhD, UQ (2015-2019)	Development of early predictors of long-term neurodevelopmental outcome for preterm infants	<b>Paul Colditz</b> , Mark Davies
Ms Ji Yeon Kim	PhD, UQ (2015-2019)	Understanding how remote application of near infrared light induces neuroprotection	<b>Paul Colditz</b> , Jonathon Stone
Ms Annice Kong	PhD, UQ (2014-2019) <i>Awarded 2019</i>	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	<b>Paul Colditz</b> , Simon Finnigan, Roslyn Boyd, Stephen Rose
<b>Dr Melissa Lai</b>	PhD, UQ (2015-2019)	Environmental manipulation of the very preterm infant: Can dense array EEG detect developmental differences at term equivalent age	<b>Paul Colditz</b> , Simon Finnigan, Jurgen Fripp
<b>Dr Norman Ma</b>	MPhil, UQ (2011-2019)	Brain injury severity in a neonatal model of hypoxic ischemia following potential neuroprotective interventions	Tracey Bjorkman, <b>Craig Winter</b> , <b>Paul Colditz</b>
Ms Abirami Ratnasingham	PhD, UQ (2016-2019) <i>Submitted 2019</i>	Long term consequences of altered neonatal adiposity	<b>Barbara Lingwood</b> , <b>Timothy Donovan</b> , Marloes Nitert Dekker, Peter Davies, Yvonne Eiby
<b>Ms Sonia Sam</b>	PhD, UQ (2011-2019)	Cardiovascular factors associated with poor outcome in preterm infants	<b>Barbara Lingwood</b> , <b>Paul Colditz</b>
Mr Timothy Sherry	PhD, UQ (2015-2019)	Identification of brain events via electroencephalogram EEG through blind source separation	<b>Paul Colditz</b>
Dr Karen Barlow	PhD, UQ (2017-2020)	Melatonin in improving outcome after acquired brain injury	Ros Boyd, <b>Paul Colditz</b>
Mr Caleb Stewart	MPhil, UQ (2017-2019)	Modelling the impact of preterm birth on neurodevelopmental trajectories via neonatal MRI maturation index	<b>Paul Colditz</b> , Kerstin Pannek
Mr Elliot Teo	PhD, UQ (2017-2020)	Novel adjunctive therapies for the treatment of neonatal hypoxic-ischemic encephalopathy	Tracey Bjorkman, <b>Paul Colditz</b>
Ms Lara Jones	PhD, UQ (2018-2021)	Effect of placental stem cells on the blood brain barrier in a model of hypoxic-ischemic encephalopathy	<b>Paul Colditz</b> , Tracey Bjorkman

## RBWH Research Staff with research roles, positions or appointments: e.g. Coordinators, Fellow, Adjunct and Honorary appointments

Name <i>(RBWH Staff in bold)</i>	Type of Position	Research Program	Affiliated University/ies
<b>Paul Colditz</b>	Professor of Perinatal Medicine	Clinical neonatology, neuroscience, biomedical signal processing	University of Queensland
<b>Timothy Donovan</b>	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
<b>Katie Foxcroft</b>	Adjunct Fellow	Clinical Trial Coordinator	University of Queensland
<b>Annelise Kirkham</b>	Research Nurse	Clinical Trials	University of Queensland
<b>Melissa Lai</b>	Senior Lecturer	EEG in preterm babies	University of Queensland
<b>Gillian Lack</b>	Research Nurse	Clinical Trials	University of Queensland
<b>Barbara Lingwood</b>	Senior Research Fellow	Cardiovascular function in the preterm infant, infant body composition	University of Queensland
<b>Eliza Hughes</b>	Research Nurse	Clinical Trials	University of Queensland
<b>Lisa McKeown</b>	Research Nurse	Clinical Trials	University of Queensland
<b>Emma Gibbs</b>	Research Nurse	Clinical Trials	University of Queensland

## RBWH Research Staff with research roles, positions or appointments e.g. Coordinators, etc (cont)

Name <i>(RBWH Staff in bold)</i>	Type of Position	Research Program	Affiliated University/ies
<b>Bonnie McNeill</b>	Research Nurse	Clinical Trials	University of Queensland
<b>Angela Backen</b>	Research Nurse	Clinical Trials	University of Queensland
<b>Jany Pienaar</b>	Academic Title Holder	Intrauterine growth restriction studies	University of Queensland
<b>Kylie Smart</b>	Research Nurse	Clinical Trials	University of Queensland
<b>Karen Taylor</b>	Research Nurse	Clinical Trials Group supporting: Enhanced parenting to improve developmental outcomes in preterm infants	University of Queensland

## Honorary Positions: e.g. Non-RBWH staff with research appointments at RBWH

Name	Position	Research Program	Affiliated University/ies
Tracey Bjorkman	Senior Research Fellow	Hypoxic-ischaemic brain injury, growth restriction, inflammation and seizures in the neonate	University of Queensland
Nigel Barnett	Honorary Senior Fellow	The effects of hypoxia/ischaemia in visual development and disease	University of Queensland
Boualem Boashash	Emeritus Professor	Time-frequency signal analysis, biomedical signal processing, spectral estimation, signal detection and classification	University of Queensland
Kirat Chand	Research Officer	Hypoxic-ischaemic brain injury, growth restriction, inflammation and seizures in the neonate	University of Queensland
Yvonne Eiby	Research Fellow	The cardiovascular system of preterm infants	University of Queensland
Christine East	Honorary Professor	Fetal monitoring	University of Queensland
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
Kate Goasdoue	Research Technician	Newborn brain injury	University of Queensland
Annice Kong	Research Technician	EEG in the newborn brain	University of Queensland
Janet Hammill	Honorary Senior Fellow	Collaboration for Alcohol Related Developmental Disorders	University of Queensland
Lisa Kubenk	Senior Research Technician	Cardiovascular function in the preterm infant	University of Queensland
Penny Love	Honorary Fellow	Preterm massage study	University of Queensland
John Luff	Senior Research Assistant	Hypoxic-ischaemic brain injury, growth restriction, inflammation and seizures in the neonate	University of Queensland
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
Lipsa Mohanty	Senior Research Technician	Hypoxic-ischaemic brain injury, growth restriction, inflammation and seizures in the neonate	University of Queensland
Randal Moldrich	Honorary Fellow	Preterm brain outcomes	University of Queensland
Stephanie Miller	Research Officer	Hypoxic-ischaemic brain injury, growth restriction, inflammation and seizures in the neonate	University of Queensland
Kym Morris	Research Assistant	Clinical Trials	University of Queensland
Margo Pritchard	Honorary Senior Fellow	Child health surveillance and intervention	Australian Catholic University
Stephen Rose	Honorary Professor	Development and application of advanced MRI techniques to aid the detection and monitoring of disease processes	University of Queensland
Julie Wixey	Research Fellow	Hypoxic-ischaemic brain injury, intrauterine growth restriction and inflammation in the neonatal brain	University of Queensland
Ian Wright	Honorary Professor	Neonatal microcirculation	University of Wollongong
Elliott Teo	Research Technician	EEG in the Newborn Brain	University of Queensland

## Current RBWH Research Group / Department Led Research Activity

RBWH Research Group/Department Led Researchers <i>(RBWH staff in bold)</i>	Collaborative Researchers and Others <i>(RBWH staff in bold)</i>	Research Project Title
<b>Paul Colditz</b>	Bjorkman T, Wixey J	Inflammation in the growth restricted newborn
<b>Jany Pienaar</b>	Wixey J, Chand K, <b>Colditz P</b>	Is the blood brain barrier disrupted in intrauterine growth restricted newborns?
<b>Mel Lai</b>	Bjorkman T, Wixey J, Colditz P	Does the plasma protein fetuin protect the injured newborn brain?
<b>Paul Colditz</b>	Khosrotehrani K, Wixey J	Improving brain outcomes in the growth restricted newborn using placental stem cell treatment
<b>Paul Colditz</b>	Khosrotehrani K, Bjorkman T, Patel J, Wixey J	Stem cell treatment for neonatal hypoxic ischemic encephalopathy
<b>Paul Colditz</b>	Wixey J, Bjorkman T	Reducing inflammation in growth restricted newborn brains
<b>Paul Colditz</b>	Khosrotehrani K, Bjorkman T, Fisk N, <b>Lingwood B</b> , Wixey J	Improving brain oxygen levels in babies using stem cell treatment
<b>Barbara Lingwood</b>	Stark M, <b>Colditz P</b> , Wright I, Eiby Y	A pre-clinical trial of early blood transfusion for improving cerebral oxygen delivery in very preterm neonates
<b>Paul Colditz</b>	<b>Koorts P</b> , Liley H, Hunt R, Jacobs S, Badawi N, Morris S, Osborn D	PAEAN: Preventing Adverse Outcomes of Neonatal Hypoxic Ischaemic Encephalopathy with Erythropoietin: A Phase III Randomised Placebo Controlled Multicentre Clinical Trial
<b>Paul Colditz</b>	Boyd R, Malhotra A, Rose S, Boashash B, Ditchfield M, Fahey M, Pannek K, Moldrich R	Neurodevelopment of the preterm infant (PREBO)

## Collaborative Research Activity involving RBWH Research Group / Department

Collaborative Led Researchers	RBWH Researchers and Others <i>(RBWH staff in bold)</i>	Research Project Title
James Roberts	Michael Breakspear, Sampsa Vanhatalo, <b>Paul Colditz</b>	Novel methods for early bedside detection and prognosis of preterm brain injury
Julie Wixey	Kirat Chand, Tracey Bjorkman, <b>Paul Colditz</b>	Contribution of systemic inflammatory response to brain injury in growth restricted newborns
Roslyn Boyd	I Novak, E Wallace, N Badawi, M Fahey, S Rose, <b>P Colditz</b> , 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	<b>Paul Colditz</b> , S Rose, M Karunanithi, A Smith, A Scuffham, P Edwards, I Novak, C Morgan, N Badawi	Advancing Cerebral Palsy in Queensland
Roslyn Boyd	Novak, Euan Wallace, Nadia Badawi, Michael Fahey, Stephen Rose, <b>Paul Colditz</b> , Ziviani, Elliott, Stott	Australasian Cerebral Palsy Clinical Trials Network (AusCP-CTN): optimizing interventions and effective services for children with cerebral palsy

## Research Awards and Achievements

Recipient <i>(RBWH staff in bold)</i>	Award	Event
Paul Colditz	Researcher of the Year	2019 Metro North Research Excellence Awards
Kirat Chand	Publication of the Month February	UQCCR
Kate Goasdoue/Stephanie Miller	New Investigator Award	Perinatal Society of Australia and New Zealand
Julie Wixey	Finalist + Winner of QLD People's Choice Award	Fresh Science
Tracey Bjorkman	Leader of the Future Award (Academic)	Faculty of Medicine Excellence Awards, The University of Queensland
Tracey Bjorkman	Early Career Researcher Supervisor of the Year	UQ Centre for Clinical Research Directors Awards
Barbara Lingwood	Special Award for Contribution to UQCCR	UQ Centre for Clinical Research Directors Awards
Julie Wixey	Early Career Researcher of the Year	UQ Centre for Clinical Research Directors Awards
Tracey Bjorkman, Stephanie Miller, Kirat Chand, Julie Wixey, Yvonne Eiby, <b>Barbara Lingwood</b>	Facilitators Award	CSIRO On Prime

## Research Grants

Investigators <i>(RBWH staff in bold)</i>	RBWH Research Groups / Departments	Project Title	Granting Body	Total of funds awarded	Funds used in 2019	Years
<b>Lai M</b> , Bjorkman T, Wixey J, <b>Colditz P</b>	Perinatal Research Centre	Does the plasma protein fetuin protect the injured newborn brain?	RBWH and RBWH Research Project Grant	\$40,000	\$40,000	2019
<b>Pienaar J</b> , Wixey J, Chand K, <b>Colditz P</b>	Perinatal Research Centre	Is the blood brain barrier disrupted in intrauterine growth restricted newborns?	RBWH and RBWH Research Project Grant	\$40,000	\$40,000	2019
Wixey J, Chand K	Perinatal Research Centre	Contribution of systemic inflammatory response to brain injury in growth restricted newborns	NHMRC Project grant	\$358,371	\$179,185	2018-2020
<b>Colditz P</b> , Khosrotehrani K, Bjorkman T, Patel J, Wixey J	Perinatal Research Centre	Stem cell treatment for neonatal hypoxic ischemic encephalopathy	NHMRC Project grant	\$954,195	\$318,065	2018-2019
Roberts J, Breakspear M, Vanhatalo S, <b>Colditz P</b>	Perinatal Research Centre	Novel methods for early bedside detection and prognosis of preterm brain injury	NHMRC Project grant	\$630,880	\$210,293	2018-2020
<b>Colditz P</b> , 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	\$140,000	\$46,666	2018-2020
<b>Colditz P</b> , Bjorkman T, Wixey J	Perinatal Research Centre	Inflammation in the growth restricted newborn brain	RBWH HIRF Research Project	In kind	In kind	2019
<b>Lingwood B</b> , Stark M, Colditz P, Wright I, Eiby Y	Perinatal Research Centre	A pre-clinical trial of early blood transfusion for improving cerebral oxygen delivery in very preterm neonates	NHMRC Project grant	\$970,603	\$323,534	2017-2019
<b>Colditz P</b> , Boyd R, Malhotra A, Rose S, Boashash B, Ditchfield M, Fahey M, Pannek K, Moldrich R	Perinatal Research Centre	Neurodevelopment of the preterm infant (PREBO)	NHMRC Project grant	\$1,645,141	\$274,190	2015-2020

## 2019 Research Publications

### Journal Articles

- Wixey JA, Sukumar KR, Pretorius R, Lee KM, **Colditz PB**, Bjorkman ST, Chand KK. Ibuprofen Treatment Reduces the Neuroinflammatory Response and Associated Neuronal and White Matter Impairment in the Growth Restricted Newborn. *Front Physiol.* 2019; 10:541
- Wixey JA, Lee KM, Miller SM, Goasdoue K, **Colditz PB**, Tracey Bjorkman S, Chand KK. Neuropathology in intrauterine growth restricted newborn piglets is associated with glial activation and proinflammatory status in the brain. *J Neuroinflammation.* 2019;16(1):5
- 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
- Loudon W, Wong A, Finnigan S, Tippett V. Stroke Prehospital Informed Decision-Making Using EEG Recordings (SPIDER). *Disaster and Emergency Medicine.* 2019:s87-s8
- Lingwood BE**, Eiby YA, Bjorkman ST, Miller SM, Wright IMR. Supporting preterm cardiovascular function. *Clin Exp Pharmacol Physiol.* 2019;46(3):274-9
- Lewindon PJ, Puertolas-Lopez MV, Ramm LE, Noble C, Pereira TN, Wixey JA, et al. Accuracy of Transient Elastography Data Combined With APRI in Detection and Staging of Liver Disease in Pediatric Patients With Cystic Fibrosis. *Clin Gastroenterol Hepatol.* 2019
- Gunaratne AW, Makrides M, Collins CT, Gibson RA, McPhee AJ, Sullivan TR, Gould JF, Green TJ, Doyle LW, Davis PG, French NP, **Colditz PB**, Simmer K, Morris SA, Best KP. Docosahexaenoic acid supplementation of preterm infants and parent-reported symptoms of allergic disease at 7 years corrected age: follow-up of a randomized controlled trial. *Am J Clin Nutr.* 2019;109(6):1600-10
- Goasdoue K, Chand KK, Miller SM, Lee KM, **Colditz PB**, Wixey JA, et al. Seizures Are Associated with Blood-Brain Barrier Disruption in a Piglet Model of Neonatal Hypoxic-Ischaemic Encephalopathy. *Dev Neurosci.* 2019:1-16
- Colditz PB**, Boyd RN, Winter L, Pritchard M, Gray PH, Whittingham K, et al. A Randomized Trial of Baby Triple P for Preterm Infants: Child Outcomes at 2 Years of Corrected Age. *J Pediatr.* 2019
- Callaway LK, McIntyre HD, Barrett HL, **Foxcroft K**, Tremellen A, **Lingwood BE**, et al. Probiotics for the Prevention of Gestational Diabetes Mellitus in Overweight and Obese Women: Findings From the SPRING Double-Blind Randomized Controlled Trial. *Diabetes Care.* 2019;42(3):364-71
- 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.* 2019;14(3):e12472.



## 2019 Conference Presentations – Invited Speaker, Oral and Poster

### Invited Speakers

1. **Barbara Lingwood**. Preterm Body Composition: Is it Normal and Does it Matter. 33<sup>rd</sup> Annual Congress of Perinatal Society of Australia and New Zealand, Gold Coast, Australia. 17-20 March 2019
2. J Wixey. Placental stem cells to protect the growth restricted newborn brain. TERMIS International conference, Brisbane, Australia. 14-17 October 2019.

### Oral Presentations

1. Eiby YA, Wright IMR, Bjorkman ST, Miller SM, **Colditz PB**, Stark M, **Lingwood BE**. Volume expansion with packed RBCs maintains blood pressure and cerebral oxygenation more effectively than saline in preterm piglets. Fetal and Neonatal Physiology Society, Marysville, Australia
2. Eiby YA, Wright IMR, Bjorkman ST, Miller SM, **Lingwood BE**. A practical method for measuring blood volume in neonatal piglets. Fetal and Neonatal Physiology Society, Marysville, Australia
3. Lingwood BE, Eiby YA, Al-Theyab N, **Colditz PB**, **Donovan TJ**. Predictors of adiposity in very preterm infants before term corrected age. Fetal and Neonatal Physiology Society, Marysville, Australia
4. Ratnasingham A, Eiby YA, Wright IMR, Bjorkman ST, Miller SM, **Lingwood BE**. Infant body composition predicts later health risk. Fetal and Neonatal Physiology Society, Marysville, Australia
5. Ratnasingham A, Donovan TJ, Eiby YA, Dekker Nitert M, **Lingwood BE**. Infant body composition predicts childhood obesity DoHAD World Congress, Melbourne, Australia
6. Wixey J, Mohanty L, Teo E, Jones L, Luff J, Sim S-L, Patel J, Khosrotehrani K, **Colditz P**, Bjorkman T, Chand K. Maintaining blood vessel stability in the brain of growth restricted newborns following placental stem cell treatment. Queensland Perinatal Consortium, Gold Coast, Australia. 1 November 2019
7. Wixey J, Chand K, Teo E, Jones L, Luff J, Sim S-L, Patel J, Kiarash Khosrotehrani, **Paul Colditz**, S. Tracey Bjorkman. Using stem cells sourced from the placenta to protect the growth restricted newborn. Herston Healthcare Symposium, Brisbane, Australia. 9-12 September 2019
8. Wixey J, Pretorius R, Sukumar K, Miller S, Goasdoue K, **Colditz P**, Bjorkman T, Chand K. Therapeutically reducing neuronal and white matter impairment in the growth restricted newborn brain. In: Proceedings of the 11<sup>th</sup> International Conference on Brain Monitoring and Neuroprotection in the Newborn. Florida, USA. Feb 2019
9. Eiby Y, Wright I, **Lingwood B**. Does the vascular response to adrenergic agents explain their ineffectiveness in preterm piglets? In: Proceedings of the 33<sup>rd</sup> Annual Meeting, Fetal and Neonatal Workshop of Australia and New Zealand; 15-16 March 2019; Gold Coast
10. Ratnasingham A, **Donovan T**, Eiby Y, Dekker Nitert M, **Lingwood B**. Infant body composition predicts childhood obesity. In: Proceedings of the 33<sup>rd</sup> Annual Meeting, Fetal and Neonatal Workshop of Australia and New Zealand; 2019 15-16 March; Gold Coast
11. Wixey J, Chand K, Teo E, Jones L, Pretorius R, Miller S, Luff J, Sim SL, Patel J, Khosrotehrani K, **Colditz P**, Bjorkman T. Placental stem cells to protect the newborn IUGR brain. In: Proceedings of the 33<sup>rd</sup> Annual Fetal and Neonatal Workshop of Australia and New Zealand, Gold Coast, Australia. 15-16 March 2019
12. Jones L, Miller S, Luff J, Chand K, Teo E, Sim SL, Patel J, Khosrotehrani K, **Colditz P**, Wixey J, Bjorkman T. Investigating the effect of placental stem cells on the blood brain barrier in a model of HIE. In: Proceedings of the 33<sup>rd</sup> Annual Fetal and Neonatal Workshop of Australia and New Zealand, Gold Coast, Australia. 15-16 March 2019
13. Miller S, Eiby Y, Wixey J, Chand K, Sim SL, Patel J, Khosrotehrani K, **Colditz P**, **Lingwood B**, Bjorkman T. Effect of stem cells on vascular stability in the preterm. In: Proceedings of the 33<sup>rd</sup> Annual Fetal and Neonatal Workshop of Australia and New Zealand, Gold Coast, Australia. 15-16 March 2019
14. Julie Wixey, Kirat Chand, Elliot Teo, Lara Jones, John Luff, Seen-Ling Sim, Jatin Patel, Kiarash Khosrotehrani, **Paul Colditz**, S. Tracey Bjorkman. Using stem cells sourced from the placenta to protect the growth restricted newborn. In: Proceedings of the 28<sup>th</sup> Annual RBWH Healthcare Symposium; 2019 9-12 September; Herston Australia.

### Poster Presentations

1. van Zoest RJ, Pannek K, Cowin GJ, **Colditz P**, Wixey J, Bjorkman T. Detecting brain injury after intrauterine growth restriction using probabilistic tractography, DTI and NODDI in the neonatal piglet. In: Proceedings of the 33<sup>rd</sup> Annual Congress of Perinatal Society of Australia and New Zealand, Gold Coast, Australia. 17-20 March 2019
2. Wixey JW, Teo E, Jones L, Luff J, Sim S, Patel J, Khosrotehrani K, Chand KK, **Colditz PB**, Bjorkman ST. Placental stem cell treatment to protect the growth restricted newborn brain. 33<sup>rd</sup> Annual Congress of Perinatal Society of Australia and New Zealand, Gold Coast, Australia. 17-20 March 2019
3. Goasdoue K, Miller SM, Billing L, **Colditz PB**, Bjorkman T. Hypothermia Ameliorates KCC2 expression in Newborn Hypoxic-Ischaemic Piglet. 33<sup>rd</sup> Annual Congress of Perinatal Society of Australia and New Zealand, Gold Coast, Australia. 17-20 March 2019
4. Kiarash Khosrotehrani, Julie Wixey, Elliot Teo, Lara Jones, John Luff, Seen L. Sim, Kirat Chand, Tracey Bjorkman, **Paul Colditz**, Jatin Patel. Combination placental mesenchymal and endothelial progenitor cell treatment to protect the growth restricted newborn brain. ISSCR Annual Meeting, Los Angeles, California, USA. 26-29 June 2019
5. Wixey JW, Chand KK, Teo E, Jones L, Luff J, Sim S, Patel J, Khosrotehrani K, **Colditz PB**, Bjorkman ST. Using stem cells sourced from the placental to protect the growth restricted newborn. 28<sup>th</sup> Annual RBWH Healthcare Symposium; 2019 9-12 September; Herston Australia
6. Eiby YA, Wright IMR, **Colditz PB**, **Lingwood BE**. Effective volume expansion to protect the preterm brain. 28<sup>th</sup> Annual RBWH Healthcare Symposium; 2019 9-12 September; Herston Australia
7. Elliot Teo, Tracey Bjorkman, Kirat Chand, Julie Wixey, Stephanie Miller, Seen-Ling Sim, Jatin Patel, Kiarash Khosrotehrani, **Paul Colditz**. From vein to brain: stem cells for the treatment of newborn hypoxic-ischemic encephalopathy. 2019 Neuroimmunology Australia Workshop. Brisbane, Australia. July, 2019
8. Lara Jones, Elliot Teo, Stephanie Miller, Kirat Chand, Julie Wixey, **Paul Colditz**, Tracey Bjorkman, Jatin Patel, Seen-Ling Sim, Kiarash Khosrotehrani. Interrogating blood brain barrier disruption attributable to neonatal hypoxic-ischemic encephalopathy and potential therapeutic targets. Queensland Perinatal Consortium, Gold Coast, Australia. 1 November 2019
9. Stephanie M Miller, Kate Goasdoue, Leah Billing, Elliot J Teo, Lara E Jones, Julie A Wixey, **Paul B Colditz**, S. Tracey Bjorkman. Hypothermia attenuates KCC2 expression after neonatal hypoxia-ischemia. Queensland Perinatal Consortium, Gold Coast, Australia. 1 November 2019

## Poster Presentations (cont)

10. Lara Jones, Elliot Teo, Stephanie Miller, Kirat Chand, Julie Wixey, **Paul Colditz**, Tracey Bjorkman, Jatin Patel, Seen-Ling Sim, Kiarash Khosrotehrani. Interrogating blood brain barrier disruption attributable to neonatal hypoxic-ischemic encephalopathy and potential therapeutic targets. UQ Faculty of Medicine – HDR Clinical and public health symposium.

## Details of staff that completed their PhDs in 2019 within your department / research group

Name	Name of Project	Completed Date	Affiliated University/ies
Kate Goasdoue	A novel therapy for neonatal seizures	2019	The University of Queensland
Annicc Kong	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	2019	The University of Queensland

## Other communications and outputs:

<https://www.uq.edu.au/news/article/2019/04/common-anti-inflammatory-could-protect-baby-brains>

Dr Julie Wixey – UQ news article – ibuprofen treatment to protect the growth restricted newborn

<https://research.uq.edu.au/research-capabilities-showcase>

Dr Tracey Bjorkman. Events at Birth. Research Showcase Capabilities, St Lucia, Brisbane. 20 September 2019

Wixey J. Ibuprofen treatment to protect the growth restricted newborn brain. Fresh Science Finals, QUT, Brisbane. November

Teo E. The Stem cell therapy: A new hope for neonatal hypoxic-ischemic encephalopathy. 21 August 2019

Wixey J. Neuroprotective effects of placental stem cell treatment for the intrauterine growth restricted newborn. UQCCR Seminar Series, Brisbane. 4 September 2019

Bjorkman Y. Implications for healthy brain development UQCCR Seminar Series, Brisbane. 12 June 2019

<https://freshscience.org.au/events/south-queensland>

[https://freshscience.org.au/state/qld/\\_\\_trashed](https://freshscience.org.au/state/qld/__trashed)

<https://www.medianet.com.au/releases/182383/>

Dr Wixey – Fresh Science articles

Chand K. Neuroimmunomodulation in the growth restricted newborn. UQCCR Seminar Series, Brisbane. 11 December 2019.

## Perinatal Research Centre Team



**Left to Right:** Annelise Kirkham, Christine Finn, Gill Lack, Prof Paul Colditz, Lisa McKeown, Kym Morris, Kylie Smart, Katie Foxcroft

# 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 2019 we completed training at four 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, completed recruitment in 2019.



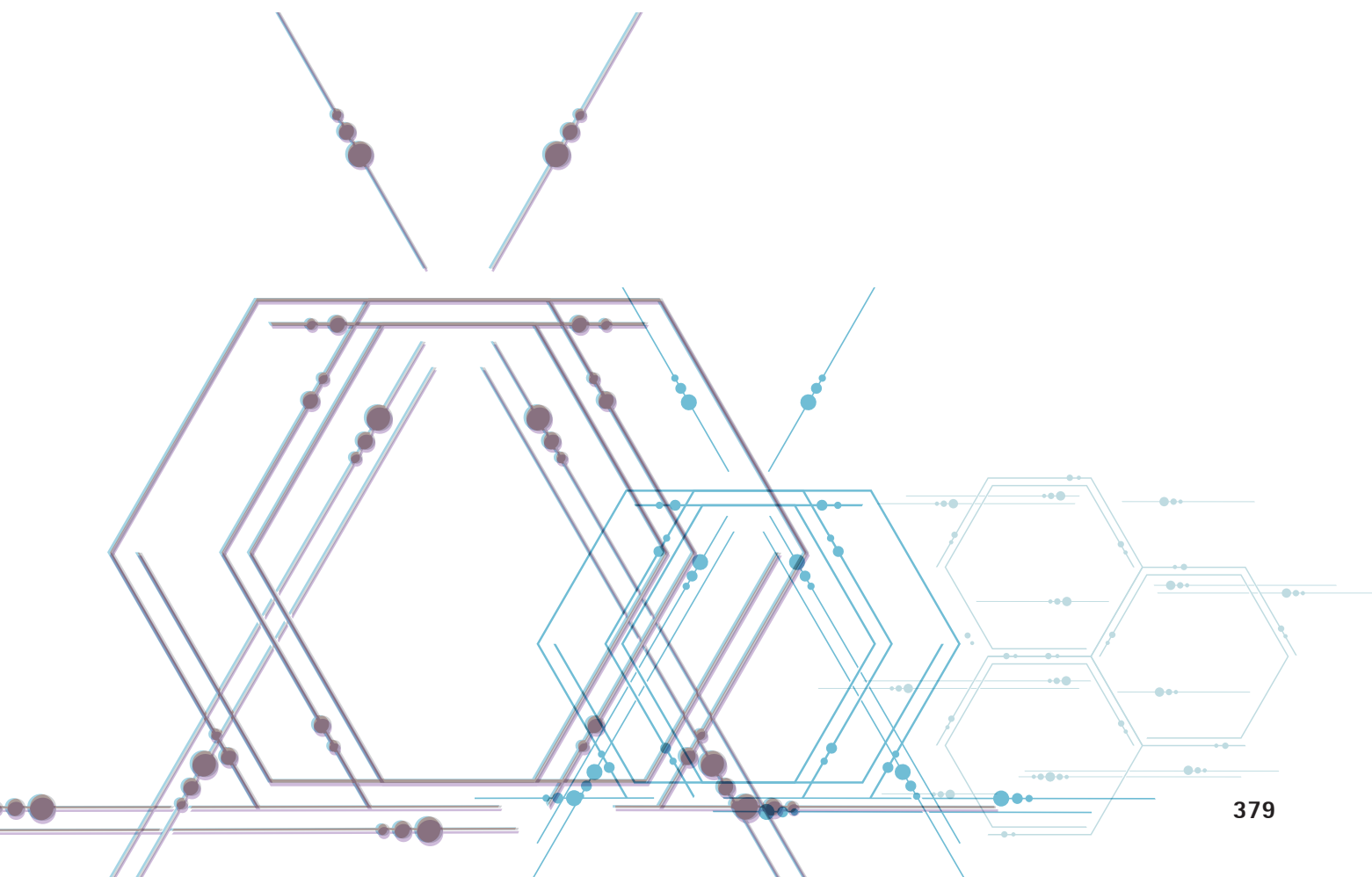
**Back row (L-R):** Karen Sanday, Vanessa Behan, Kerry Millgate, Vanessa Taylor, Trudi Cattley  
**Front row (L-R):** Dr Andrea Garrett, Prof Andreas Obermair

**RBWH Research Staff with research roles, positions or appointments:** e.g. Coordinators, Fellow, Adjunct and Honorary appointments

Name <i>(RBWH Staff in bold)</i>	Type of Position	Research Program	Affiliated University/ies
Trudi Cattle	Clinical Research Manager	Gynaecological Oncology	The University of Queensland
Vanessa Behan	Clinical Trial Manager	Gynaecological Oncology	The University of Queensland
Vanessa Taylor	Clinical Trial Manager	Gynaecological Oncology	The University of Queensland
Kerry Millgate	Clinical Trial Coordinator	Gynaecological Oncology	The University of Queensland

**Current RBWH Research Group / Department Led Research Activity**

RBWH Research Group / Department Led Researchers <i>(RBWH staff in bold)</i>	Collaborative Researchers and Others <i>(RBWH staff in bold)</i>	Research Project Title
<b>Prof Andreas Obermair</b>	<b>Jim Nicklin</b> ( <i>Gyn Onc</i> ), <b>Russell Land</b> ( <i>Gyn Onc</i> ), <b>Andrea Garrett</b> ( <i>Gyn Onc</i> ), <b>Amy Tang</b> ( <i>Gyn Onc</i> ), Lewis Perrin ( <i>Mater</i> ), Marcelo Nascimento ( <i>GCUH</i> ), Jonathan Carter ( <i>Chris O'Brien</i> ), Orla McNally ( <i>The Women's</i> ), Kym Reid ( <i>Monash</i> ), Yee Leung ( <i>KEMH</i> ), Stuart Salfinger ( <i>SJOG</i> ), Peter Sykes ( <i>Christchurch</i> ), Cecile Bergzoll ( <i>Wellington</i> ), Lois Eva ( <i>Auckland</i> )	A Phase II Randomised Clinical Trial of Mirena® ± Metformin ± Weight Loss Intervention in Patients with Early Stage Cancer of the Endometrium
<b>Prof Andreas Obermair</b>	Monika Janda ( <i>QUT</i> )	A stepped wedge cluster trial to implement and evaluate a model of training for practising gynaecologists in Total Laparoscopic Hysterectomy
<b>Prof Andreas Obermair</b> , Paul Thomas	<b>Jim Nicklin</b> ( <i>Gyn Onc</i> ), <b>Russell Land</b> ( <i>Gyn Onc</i> ), <b>Andrea Garrett</b> ( <i>Gyn Onc</i> ), <b>Amy Tang</b> ( <i>Gyn Onc</i> )	Impact of gated PET/CT on the diagnosis of distant metastases of advanced epithelial ovarian, fallopian tube, and primary peritoneal cancer



## Collaborative Research Activity involving RBWH Research Group / Department

Collaborative Led Researchers	RBWH Researchers and Others <i>(RBWH staff in bold)</i>	Research Project Title
Sandi Hayes (QUT)	<b>Prof Andreas Obermair</b> (Gyn Onc), <b>Jim Nicklin</b> (Gyn Onc), <b>Russell Land</b> (Gyn Onc), <b>Andrea Garrett</b> (Gyn Onc), <b>Amy Tang</b> (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)	<b>Prof Andreas Obermair</b> (Gyn Onc), <b>Jim Nicklin</b> (Gyn Onc), <b>Russell Land</b> (Gyn Onc), <b>Andrea Garrett</b> (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

## Research Awards and Achievements

Recipient <i>(RBWH staff in bold)</i>	Award	Event
QCGC Research	Award for Excellence in Service – Commendation	2019 UQ Awards for Excellence
QCGC Research	Award for Clinical Trial Expertise	UQ Centre for Clinical Research Director Awards 2019

## Research Grants

Investigators <i>(RBWH staff in bold)</i>	RBWH Research Groups / Departments	Project Title	Granting Body	Total of funds awarded	Funds used in 2019	Years
Janda M, <b>Obermair A</b> , Gebiski V, Graves N, Armfield N	<b>QCGC Research</b>	The Implementation of Minimally Invasive hysterectomy (IMAGINE) trial	NHMRC Partnership Grant	\$893,854	\$310,623	2018-2020

## 2019 Research Publications

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### Journal Articles

1. **Obermair A**, Armfield NR, Graves N, GebSKI V, Hanna GB, Coleman MG, Hughes A, Janda M. How to train practising gynaecologists in total laparoscopic hysterectomy: protocol for the stepped-wedge IMAGINE trial. *BMJ Open*. 2019 May 9;9(5): e027155
2. Armfield NR, Janda M, **Obermair A**. *Int J Qual Health Care*. 2019 May 1;31(4):283-288. Obesity in total laparoscopic hysterectomy for early stage endometrial cancer: health gain and inpatient resource use
3. Tanaka K, Eriksson L, Asher R, **Obermair A**. Incidence of adverse events, preventability and mortality in gynaecological hospital admissions: A systematic review and meta-analysis. *Aust N Z J Obstet Gynaecol*. 2019 Apr;59(2):195-200
4. Robertson JA, **Sanday K**, **Nicklin J**. Malignant ovarian germ cell tumours in the post-menopausal population. *Aust N Z J Obstet Gynaecol*. 2019 Apr;59(2):285-287
5. **Obermair A**, Simunovic M, Janda M. The impact of team familiarity on surgical outcomes in gynaecological surgery. *J Obstet Gynaecol*. 2019 Sep 13:1-3
6. Steele ML, Janda M, Vagenas D, Ward LC, Cornish BH, Box R, Gordon S, Matthews M, Poppitt SD, Plank LD, Yip W, Rowan A, Reul-Hirche H, **Obermair A**, Hayes SC. A Bioimpedance Spectroscopy-Based Method for Diagnosis of Lower-Limb Lymphedema. *Lymphat Res Biol*. 2019 Sep 5
7. **Obermair A**, Asher R, Pareja R, Frumovitz M, Lopez A, Moretti-Marques R, Rendon G, Ribeiro R, Tsunoda A, Behan V, Buda A, Bernadini MQ, Zhao H, Vieira M, Walker J, Spirtos NM, Yao S, Chetty N, Zhu T, Isla D, Tamura M, **Nicklin J**, Robledo KP, GebSKI V, Coleman RL, Salvo G, Ramirez PT. Incidence of adverse events in minimally invasive versus open radical hysterectomy in early cervical cancer: Results of a randomized controlled trial. *Am J Obstet Gynecol*. 2019 Oct 3.

## 2019 Conference Presentations – Invited Speaker, Oral and Poster

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### Invited Speakers

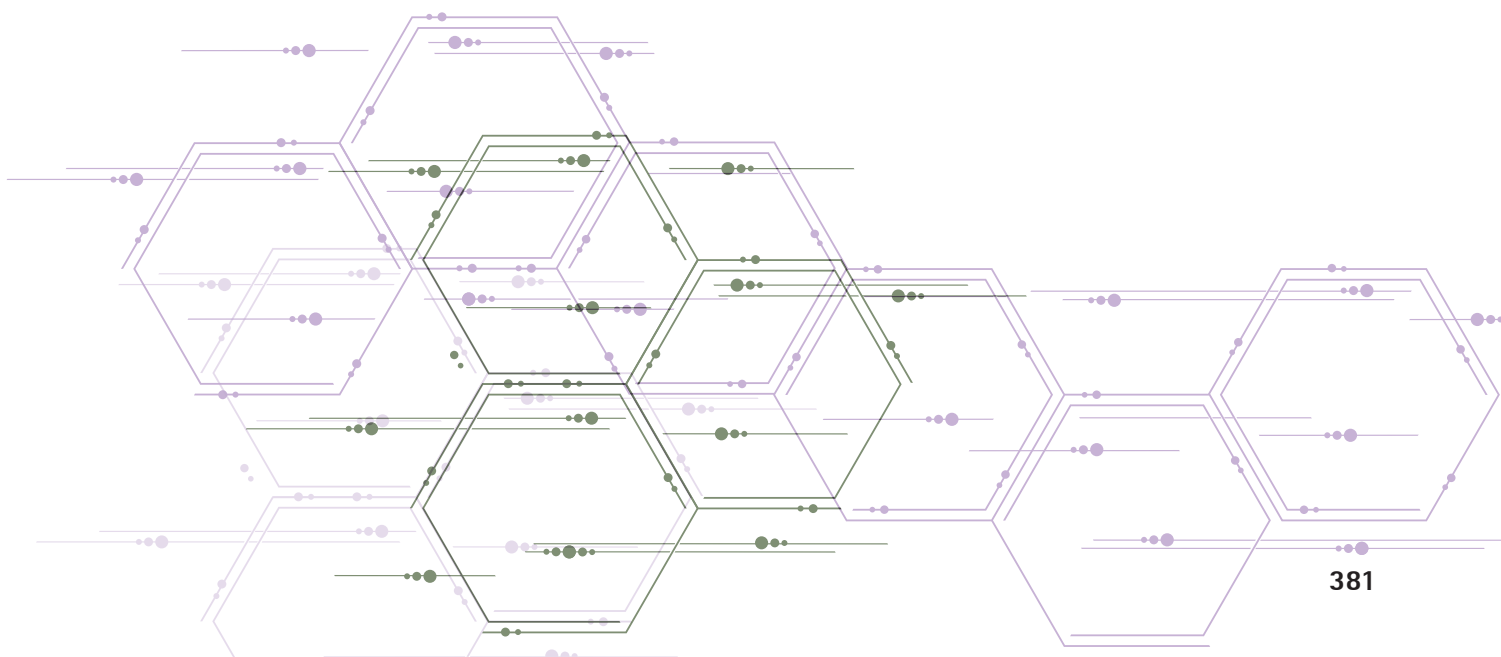
1. Schmeler K, Hyde S, Saidi S, **Nicklin J**. ASGO Debate: Minimally invasive surgery is contra-indicated in patients with early stage cervical cancer. In: Proceedings of the Australian Society of Gynaecologic Oncologists Annual Scientific Meeting Sydney June 5<sup>th</sup>-9<sup>th</sup> 2019
2. **Garret A**. Facilitating the Wellbeing of our Trainees. In: Proceedings of the Australian Society of Gynaecologic Oncologists Annual Scientific Meeting, Sydney June 5<sup>th</sup>-9<sup>th</sup> 2019
3. Janda M, **Obermair A**. The implementation of a standardized surgical training program for specialist gynaecologists to decrease the rate of open, abdominal hysterectomy. In: Proceedings of the International Gynecologic Cancer Society Annual Global Meeting, Rio de Janeiro, Brazil September 19-21, 2019
4. Janda M, GebSKI V, Forder P, **Obermair A**. Weight perception and sociodemographic characteristics following endometrial cancer treatment. In: Proceedings of the International Gynaecologic Cancer Society Annual Global Meeting, Rio de Janeiro, Brazil September 19-21, 2019.

### Oral Presentations

1. **Obermair A**. Quality Assurance in Cervical Cancer Clinical Trials. 21<sup>st</sup> European Congress on Gynaecological Oncology, Nov 2-5, 2019, Athens Greece
2. **Obermair A**. LACC Trial – Interpreting of the Trial Results and Implications on Future Clinical Trial Design. 21<sup>st</sup> European Congress on Gynaecological Oncology, Nov 2-5, 2019, Athens Greece.

### Poster Presentations

1. Sanjida S, **Obermair A**, Janda M. Anxiety and depression in patients with endometrial cancer according to the hospital anxiety and depression scale: A longitudinal analysis. In: Proceedings of the 28<sup>th</sup> Annual RBWH Healthcare Symposium. September 2019.





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