

2017

# RBWH

## RESEARCH REPORT

### WOMEN'S AND NEWBORN SERVICES

RBWH

*celebrating*

*150*  
*years*

1867-2017



Queensland  
Government

# WOMEN'S AND NEWBORN SERVICES



**TAMI PHOTINOS**  
Executive Director  
Women's and Newborn Services

*We are dedicated  
to quality  
multidisciplinary  
healthcare*

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

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

Queensland Centre for Gynaecological Cancer (QCGC) has continued research activities in 2017 to help improve patient outcomes by researching the most effective treatment for women and gynaecological cancers. QCGC has received funding for the IMAGINE Study which aims to implement and evaluate a model of training for practising gynaecologists in Total Laparoscopic Hysterectomy. The IMAGINE study was initiated at two Queensland Health Hospitals in 2017.

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

The Grantley Stable Neonatal Unit (GSNU) continues to have an interest in a varying number of research opportunities and looks to further enhance collaborations between universities and internal departments that were developed in 2017. GSNU's close collaboration with the Perinatal Research Centre continues to translate research into clinical practice.

Obstetric Medicine continues to add to the research program with a focus on women with complex pregnancies and improving the outcomes for both mother and infant. The department is involved in a number of collaborative research projects including a large NHMRC funded study evaluating the guided treatment of asthma in pregnancy.

The Department of Obstetrics and Gynaecology continues to increase its activity and provides tertiary and quaternary obstetrics and gynaecology services for Metro North Hospital and Health Service and Queensland. Both departments and its subdivisions are involved in multidisciplinary research to ensure the care of the women we treat and management of their care is contemporary and evidenced based. Significant research contributions continued in 2017 by the Maternal Fetal Medicine Unit with Dr Renuka Sekar and MFM Fellow Dr Christoph Lehner completing a 10 year review of unexplained stillbirth and applicability to the PSANZ guidelines (awaiting publication), Statewide Paediatric and Adolescent Gynaecology Services, Urogynaecology, Reproductive Endocrinology and Infertility divisions of Women's and Newborn Services.

## PERINATAL RESEARCH CENTRE

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

With the support of our national and international collaborators we achieved much towards our goals in 2017. We were pleased to be awarded research grants in 2017 from RBWH Foundation, Children's Hospital Foundation, Perpetual Impact and two NHMRC project grants. Prof Colditz' NHMRC study will examine placental stem cell treatment to protect babies' brains. This novel project uses the baby's own placenta to source the stem cells. The use of human cells has the merit of being immediately relevant to translate to clinical trials. Dr Wixey's NHMRC project will study the role of inflammation and brain injury in the growth restricted baby. Growth restriction during pregnancy can damage the baby's brain and result in poor outcomes. This study will examine whether a readily available and safe anti-inflammatory treatment can reduce or prevent brain injury following intrauterine growth restriction.

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

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

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

The Harcourts RBWHF Butterfly Ball, held at the Hilton, was a great success and enjoyed by many. Prof Paul Colditz and Dr Tracey Bjorkman led tours of the nursery and labour ward at the RBWH with the Lions Medical Research Foundation Personality Quest entrants. We would like to thank RBWH Foundation, Harcourts Foundation, Lions Medical Research Foundation, Dr Chris Burke 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 (RBWH STAFF IN BOLD)	CURRENT STUDIES (E.G. PHD, MASTERS ETC.) UNIVERSITY (DURATION)	RESEARCH PROJECT TITLE	SUPERVISORS (RBWH STAFF IN BOLD)
MD Abdul Awal	PhD, UQ (2013-2017)	Classification and localization of neonatal EEG abnormalities using time-frequency image processing based neural network and support vector machine	<b>Paul Colditz</b> , Boualem Boashash
Ms Nada Al-Theyab	PhD, UQ (2012-2017)	Preterm infant body composition	Barbara Lingwood, <b>Timothy Donovan</b> , <b>Paul Colditz</b>
Ms Rebecca Caesar	PhD, UQ (2012-2017)	Early predictors for neurodevelopmental outcome and prioritisation of service delivery for at risk premature infants	Roslyn Boyd, <b>Paul Colditz</b>
<b>Mr Matthew Fielder</b>	MPhil, UQ (2014-2017)	Novel therapies for seizures following hypoxic-ischaemic injury in neonates	Stella Tracey Bjorkman, <b>Paul Colditz</b>
Ms Elizabeth Forbes	MPhil, UQ (2013-2017)	Changes in cardiac structure and biochemistry during transition to extra uterine life in preterm and term piglets	Yvonne Eiby, Barbara Lingwood, Karen Moritz
Ms Joanne George	PhD, UQ Awarded 2017	Prediction of motor outcomes based on early brain structure	Roslyn Boyd, <b>Paul Colditz</b> , Stephen Rose
Ms Kate Goasdoue	PhD, UQ (2015-2018)	A novel therapy for neonatal seizures	Stella Tracey Bjorkman, Julie Wixey
Dr Luke Jardine	PhD, UQ (2015-2018)	Development of early predictors of long term neurodevelopmental outcome for preterm infants	<b>Paul Colditz</b> , <b>Mark Davies</b>
Ms Ji Yeon Kim	PhD, UQ (2015-2018)	Understanding how remote application of near infrared light induces neuroprotection	<b>Paul Colditz</b> , Jonathon Stone
Ms Annice Kong	PhD, UQ (2014-2017)	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 (2015-2018)	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 Frupp
<b>Dr Norman Ma</b>	MPhil, UQ (2011-2017)	Brain injury severity in a neonatal model of hypoxic ischemia following potential neuroprotective interventions	Stella Tracey Bjorkman, <b>Craig Winter</b> , <b>Paul Colditz</b>
Ms Stephanie Miller	PhD, UQ (2008-2017)	Examining the maturation of the GABA system in the neonatal brain and its role in hypoxic-ischaemic brain injury	Stella Tracey Bjorkman, Peter Noakes
Mr James Morong	MPhil, UQ (2015-2017)	A comparative study of in-hospital maternal mortality ratio (MMR) between the United States of America and Australia	<b>Paul Colditz</b> , Alfred Robichaux
Ms Abirami Ratnasingham	PhD, UQ (2016-2019)	Long term consequences of altered neonatal adiposity	Barbara Lingwood, <b>Timothy Donovan</b> , Marloes Nitert Dekker, Peter Davies
<b>Ms Sonia Sam</b>	PhD, UQ (2011-2017)	Cardiovascular factors associated with poor outcome in preterm infants	Barbara Lingwood, <b>Paul Colditz</b>
Ms Nabeel Sheikh	PhD, UQ (2011-2017)	Role of quantitative EEG in diagnosis, prognostication and management of acute stroke	<b>Andrew Wong</b> , <b>Simon Finnigan</b> , <b>Stephen Read</b>



NAME (RBWH STAFF IN BOLD)	CURRENT STUDIES (E.G. PHD, MASTERS ETC.) UNIVERSITY (DURATION)	RESEARCH PROJECT TITLE	SUPERVISORS (RBWH STAFF IN BOLD)
Mr Timothy Sherry	PhD, UQ (2015-2018)	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>

## 2017 RESEARCH POSITIONS: COORDINATORS, FELLOW, ADJUNCT AND HONORARY POSITIONS

NAME	TYPE OF FELLOWSHIP	RESEARCH PROJECT	UNIVERSITY (YEARS)
<b>Paul Colditz</b>	Professor of Perinatal Medicine	Clinical neonatology, neuroscience, biomedical signal processing	University of Queensland (current)
Tracey Bjorkman	Lions Senior Medical Research Fellow	Hypoxic-ischemic brain injury and seizures in the neonate	University of Queensland (current)
Nigel Barnett	Honorary Senior Fellow	The effects of hypoxia/ischaemia in visual development and disease	University of Queensland (current)
Boualem Boashash	Professor	Time-frequency signal analysis, biomedical signal processing, spectral estimation, signal detection and classification	University of Queensland (current)
Michael Colditz	Honorary Fellow	Clinical neuroscience	University of Queensland (current)
Kirat Chand	Research Officer	Hypoxic-ischaemic brain injury, growth restriction, inflammation and seizures in the neonate	University of Queensland (current)
Therese De Dassel	Honorary Research Fellow	Clinical psychology, psychiatry	University of Queensland (current)
Brendan Dietrich	Senior Research Technician	Improving outcomes for preterm infants	University of Queensland (current)
Shiyong Dong	Research Officer	Signal processing: applications to the analysis and detection of perinatal asphyxia	University of Queensland (current)
<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 (current)
Yvonne Eiby	Research Fellow	The cardiovascular system of preterm infants	University of Queensland (current)
Christine East	Honorary Professor	Fetal monitoring	Monash University (current)
<b>Simon Finnigan</b>	Senior Research Fellow	Brain monitoring techniques to improve outcomes for critically ill patients (e.g. extremely premature babies; stroke patients)	University of Queensland (current)

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

## 2017 CURRENT RBWH RESEARCH GROUP / DEPARTMENT LED RESEARCH ACTIVITY

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

## 2017 COLLABORATIVE RESEARCH ACTIVITY INVOLVING RBWH RESEARCH GROUP / DEPARTMENT

COLLABORATIVE LEAD RESEARCHERS	RBWH RESEARCHERS	RESEARCH PROJECT TITLE
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
Stella Tracey Bjorkman	Paul Colditz, Sampsa Vanhatalo	Carbon dioxide as a treatment for seizures in the newborn
Boualem Boashash	<b>Paul Colditz</b>	Automated Neonatal EEG Quality Assessment & Improvement using Artefact Filtering and Signal Segmentation
Boualem Boashash	<b>Paul Colditz</b>	Localization of EEG Abnormalities for Improving Brain Monitoring of Newborn Babies at Risk of Brain Injury using a multichannel time-frequency signal processing approach
Rebecca Pelekanos	<b>Paul Colditz</b> , Nicholas Fisk	Stem cell therapy and neurostimulation repair of white matter injury to prevent cerebral palsy
Roslyn Boyd	<b>Paul Colditz</b> , Joanne George, Stephen Rose	PPREMO: Prediction of preterm early motor and neurodevelopmental outcomes using advanced brain imaging and an early assessment toolbox
Roslyn Boyd	<b>Paul Colditz</b> , Joanne George	PPREMO: Prediction of Preterm Early Motor and neurodevelopmental Outcomes
Rodney Hunt	<b>Paul Colditz</b> , Terrie Inder, Nadia Badawi, Simmer, Helen Liley, Osborn, Cheong, Ian Wright	A study of the impact of treating electrographic seizures in term or near-term infants with neonatal encephalopathy
Roslyn Boyd	Helen Liley, Hurrion, Stephen Rose, Wallace, Paul Dawson, <b>Paul Colditz</b> , Linda Richards, Luke Jardine, Gray, Justo, Corness	Optimising Neonatal Neuroplasticity: research consortium for an MRI compatible incubator at Lady Cilento Childrens Hospital and the Mater Mothers Hospital at the University of Queensland
Roslyn Boyd	Novak, Euan Wallace, Nadia Badawi, Michael Fahey, Stephen Rose, Paul Colditz, Ziviani, Elliott, Stott	Australasian Cerebral Palsy Clinical Trials Network (AusCP-CTN): optimizing interventions and effective services for children with cerebral palsy
Paul Dawson	E Hurrion, Vicki Flenady, <b>Barbara Lingwood</b> , Yvonne Eiby, <b>Paul Colditz</b> , <b>Pieter Koorts</b> , Kumar	Improving health outcomes for preterm infants using a preclinical Pig Translational model (PigTail study)
Andrew Wong	Coulthard, Stephen Read, <b>Simon Finnigan</b>	Continuous Monitoring During Acute Stroke Reperfusion Therapy
Stella Tracey Bjorkman		Seizures and injury in the newborn hypoxic-ischemic brain



## 2017 RESEARCH AWARDS AND ACHIEVEMENTS

RECIPIENT	AWARD	EVENT
Tracey Bjorkman	UQCCR Collaborative Travel Grant	Fetal and Neonatal Workshop, New Zealand

## 2017 RESEARCH GRANTS - AWARDED

INVESTIGATORS (RBWH STAFF IN BOLD)	RBWH RESEARCH GROUPS / DEPARTMENTS	PROJECT TITLE	GRANTING BODY	AMOUNT IN 2017	TOTAL AMOUNT (YEARS)
<b>Paul Colditz</b> , Kiarash Khosrotehrani	Perinatal Research Centre	Stem cell treatment for neonatal brain injury	Perpetual Impact	\$6,000	\$12,126.84 (2017-2018)
<b>Paul Colditz</b> , Steve Mehrkanoon, <b>Simon Finnigan</b> , Stella T Bjorkman, Helen Liley, Sam Bora	Perinatal Research Centre	EEG acquisition system	Faculty of Medicine's Research Equipment and Infrastructure Investment scheme	\$41,000	\$41,000 (2017)
<b>Paul Colditz</b> , Julie Wixey, Stella T Bjorkman	Perinatal Research Centre	Reducing inflammation in growth restricted newborn brains	Children's Hospital Foundation	\$28,172	\$56,344 (2017-2018)
<b>Paul Colditz</b> , Kiarash Khosrotehrani, Stella T Bjorkman, Nick Fisk, <b>Barbara Lingwood</b> , Julie Wixey	Perinatal Research Centre	Improving brain oxygen levels in babies using stem cell treatment	Children's Hospital Foundation	\$75,000	\$150,000 (2017-2018)
<b>Tim Donovan</b> , <b>Barbara Lingwood</b> , <b>Paul Colditz</b> , Marloes Dekker Nitert	Perinatal Research Centre	Long-term consequences of altered neonatal adiposity	Royal Brisbane and Women's Hospital Foundation	\$38,979	\$38,979 (2017)
<b>Barbara Lingwood</b> , Yvonne Eiby, <b>Paul Colditz</b> , Julie Wixey	Perinatal Research Centre	A pre-clinical trial of early blood transfusion to reduce preterm brain injury	Royal Brisbane and Women's Hospital Foundation	\$38,587	\$38,587 (2017)
<b>Barbara Lingwood</b> , Michael Stark, <b>Paul Colditz</b> , Ian Wright, Yvonne Eiby	Perinatal Research Centre	A pre-clinical trial of early blood transfusion for improving cerebral oxygen delivery in very preterm neonates	NHMRC Project grant	\$323,534	\$970,603 (2017-2019)
<b>Paul Colditz</b> , Stella T Bjorkman, Julie Wixey	Perinatal Research Centre	Blood biomarkers of brain injury following hypoxia-ischaemia in the neonate	Royal Brisbane and Women's Hospital Foundation	\$40,000	\$40,000 (2017)
Roslyn Boyd, I Novak, E Wallace, N Badawi, M Fahey, S Rose, <b>P Colditz</b> , J Ziviani, C Elliott, N Stott	Perinatal Research Centre	Australasian Cerebral Palsy Clinical Trials Network (AusCP-CTN): optimizing interventions and effective services for children with cerebral palsy	NHMRC Centres of Research Excellence	\$500,000	\$2,500,000 (2017-2020)

INVESTIGATORS (RBWH STAFF IN BOLD)	RBWH RESEARCH GROUPS / DEPARTMENTS	PROJECT TITLE	GRANTING BODY	AMOUNT IN 2017	TOTAL AMOUNT (YEARS)
Roslyn Boyd, <b>Paul Colditz</b> , S Rose, M Karunanithi, A Smith, A Scuffham, P Edwards, I Novak, C Morgan, N Badawi	Perinatal Research Centre	Advancing Cerebral Palsy in Queensland	Advance QLD Innovation Partnerships Program	\$300,000	\$1,500,000 (2017-2020)
<b>Paul Colditz</b> , Julie Wixey, Susan Sullivan, <b>Melissa Lai</b>	Perinatal Research Centre	Protecting growth restricted newborn brains by reducing inflammation	Royal Brisbane and Women's Hospital Foundation	\$20,000	\$40,000 (2016-2017)
<b>Paul Colditz</b> , <b>Melissa Lai</b> , Stella T Bjorkman, Kirat Chand	Perinatal Research Centre	Novel approaches to protecting the newborn brain	Royal Brisbane and Women's Hospital Foundation	\$20,000	\$40,000 (2016-2017)
<b>Paul Colditz</b> , Roslyn Boyd, Atul Malhotra, Stephen Rose, Boualem Boashash, Michael Ditchfield, Michael Fahey, Kerstin Pannek, Randal Moldrich	Perinatal Research Centre	Neurodevelopment of the preterm infant	NHMRC Project Grant	\$329,028	\$1,645,141 (2015-2019)
Stella Tracey Bjorkman, <b>Paul Colditz</b> , Sampsa Vanhatalo	Perinatal Research Centre	Carbon dioxide as a treatment for seizures in the newborn	NHMRC Project Grant	\$238,630	\$850,890 (2015-2017)
<b>Katie Foxcroft</b> & Katie Groom	Perinatal Research Centre	STRIDER (NZAus): A randomised controlled trial of sildenafil therapy in dismal prognosis early-onset intrauterine growth restriction (New Zealand and Australia)	University of Auckland	\$6,310	\$6,310 (2015-2017)
Boualem Boashash, <b>Paul Colditz</b>	Perinatal Research Centre	Automated Neonatal EEG Quality Assessment & Improvement using Artefact Filtering and Signal Segmentation	Qatar National Research Fund	\$167,500	\$670,000 (2013-2017)
Rebecca Pelekanos, <b>Paul Colditz</b> , Zoe Ireland, Nicholas Fisk, Roslyn Boyd	Perinatal Research Centre	Stem cell therapy and neurostimulation repair of white matter injury to prevent cerebral palsy	Cerebral Palsy Alliance	\$39,875	\$159,500 (2014-2017)
<b>Paul Colditz</b> , Matthew Sanders, Roslyn Boyd, Margo Pritchard, Peter Gray, Michael O'Callaghan, Virginia Slaughter, Koa Whittingham	Perinatal Research Centre	A randomised controlled trial of enhanced parenting capacity to improve developmental outcomes in preterm infants	NHMRC Project Grant	\$166,055	\$996,335 (2012-2017)

INVESTIGATORS (RBWH STAFF IN BOLD)	RBWH RESEARCH GROUPS / DEPARTMENTS	PROJECT TITLE	GRANTING BODY	AMOUNT IN 2017	TOTAL AMOUNT (YEARS)
Stella Tracey Bjorkman	Perinatal Research Centre	Lions Senior Medical Research Fellowship: Seizures and injury in the newborn hypoxic-ischemic brain	Senior Medical Research Fellowship	\$142,333	\$996,335.25 (2011-2018)
<b>Paul Colditz,</b> <b>Barbara Lingwood,</b> Kathryn Buller	Perinatal Research Centre	Brain Research Advances in Newborns (The BRAIN Project)	Royal Brisbane & Women's Hospital Research Foundation	\$115,714	\$810,000.00 (2009-2018)

## 2017 RESEARCH PUBLICATIONS

TYPE (JOURNAL ARTICLE / BOOK / BOOK CHAPTER / LETTER)	PUBLICATION INFORMATION (RBWH STAFF IN BOLD)
Journal article	Barnes SK, Eiby YA, Lee S, <b>Lingwood BE</b> , Dawson PA. Structure, organization and tissue expression of the pig SLC13A1 and SLC13A4 sulfate transporter genes. <i>Biochem Biophys Res Commun.</i> 2017;10:215-23.
Journal article	Chand KK, Lee KM, Lavidis NA, Noakes PG. Loss of laminin-alpha4 results in pre- and postsynaptic modifications at the neuromuscular junction. <i>FASEB J.</i> 2017;31(4):1323-36
Journal article	<b>Finnigan S, Colditz PB.</b> Predominant slow EEG activity in healthy neonates: Transient thalamo-cortical dysrhythmia? <i>Clin Neurophysiol.</i> 2017;128(1):233-4.
Journal article	<b>Finnigan S, Colditz PB.</b> What is the optimal frequency range for quantifying slow EEG activity in neonates? Insights from power spectra. <i>Clin Neurophysiol.</i> 2017;129(1):143-4.
Journal article	George JM, Fiori S, Fripp J, Pannek K, Bursle J, Moldrich RX, <b>Colditz PB</b> , et al. Validation of an MRI Brain Injury and Growth Scoring System in Very Preterm Infants Scanned at 29- to 35-Week Postmenstrual Age. <i>AJNR Am J Neuroradiol.</i> 2017;38(7):1435-42.
Journal article	George JM, Pannek K, Rose SE, Ware RS, <b>Colditz PB</b> , Boyd RN. Diagnostic accuracy of early magnetic resonance imaging to determine motor outcomes in infants born preterm: a systematic review and meta-analysis. <i>Dev Med Child Neurol.</i> 2017.
Journal article	Goasdoue K, Miller SM, <b>Colditz PB</b> , Bjorkman ST. Review: The blood-brain barrier; protecting the developing fetal brain. <i>Placenta.</i> 2017;54:111-6.
Journal article	Humphrey MD, <b>Foxcroft KF, Callaway LK.</b> Obstetric risk score - revalidated for triaging high-risk pregnancies in rural areas. <i>Aust N Z J Obstet Gynaecol.</i> 2017;57(1):63-7.
Journal article	Kalanjati VP, Wixey JA, Miller SM, <b>Colditz PB</b> , Bjorkman ST. GABAA receptor expression and white matter disruption in intrauterine growth restricted piglets. <i>Int J Dev Neurosci.</i> 2017;59:1-9.
Journal article	Kane N, Acharya J, Benickzy S, Caboclo L, <b>Finnigan S</b> , Kaplan PW, Shibasaki H, Pressler R, van Putten MJAM. (2017). A revised glossary of terms most commonly used by clinical electroencephalographers and updated proposal for the report format of the EEG findings. <i>Clinical Neurophysiology Practice.</i> 2:170–185. doi: 10.1016/j.cnp.2017.07.002
Journal article	Lee KM, Chand KK, Hammond LA, Lavidis NA, Noakes PG. Functional decline at the aging neuromuscular junction is associated with altered laminin-alpha4 expression. <i>Aging (Albany NY).</i> 2017.
Journal article	Miller SM, Goasdoue K, Bjorkman ST. Neonatal seizures and disruption to neurotransmitter systems. <i>Neural Regen Res.</i> 2017;12(2):216-7.

TYPE (JOURNAL ARTICLE / BOOK / BOOK CHAPTER / LETTER)	PUBLICATION INFORMATION (RBWH STAFF IN BOLD)
Journal article	Miller SM, Kalanjati VP, <b>Colditz PB</b> , Bjorkman ST. Developmental Changes in Expression of GABAA Receptor Subunits alpha1, alpha2, and alpha3 in the Pig Brain. <i>Dev Neurosci</i> . 2017;39(5):375-85.
Journal article	Morong JJ, Martin JK, Ware RS, <b>Colditz PB</b> , Robichaux AG, 3rd. Comparison of In-Hospital Maternal Mortality Between Hospital Systems in Queensland, Australia and Louisiana, United States. <i>Ochsner J</i> . 2017;17(3):243-9.
Journal article	Ratnasingham A, Eiby YA, Dekker Nitert M, <b>Donovan T</b> , <b>Lingwood BE</b> . Review: Is rapid fat accumulation in early life associated with adverse later health outcomes? <i>Placenta</i> . 2017;54:125-30.
Journal article	Schlegel RN, Spiers JG, Moritz KM, Cullen CL, Bjorkman ST, Paravicini TM. Maternal hypomagnesemia alters hippocampal NMDAR subunit expression and programs anxiety-like behaviour in adult offspring. <i>Behav Brain Res</i> . 2017;328:39-47.
Journal article	Schleiger E, Wong A, Read S, Rowland T, Finnigan S. Poststroke QEEG informs early prognostication of cognitive impairment. <i>Psychophysiology</i> . 2017;54(2):301-9.
Journal article	Tarnow-Mordi W, Morris J, Kirby A, Robledo K, Askie L, Brown R, <b>Colditz PB</b> , et al. Delayed versus Immediate Cord Clamping in Preterm Infants. <i>N Engl J Med</i> . 2017.
Journal article	Wixey JA, Chand KK, <b>Colditz PB</b> , Bjorkman ST. Review: Neuroinflammation in intrauterine growth restriction. <i>Placenta</i> . 2017;54:117-24.
Journal article	Wixey JA, <b>Colditz PB</b> , Bjorkman ST. Targeting inflammation to reduce brain injury in growth restricted newborns: A potential treatment? <i>Neural Regen Res</i> . 2017; 12(11):1804-1806.
Journal article	Wood K, Mantzioris E, <b>Lingwood B</b> , Couper J, Makrides M, Gibson RA, et al. The effect of maternal DHA supplementation on body fat mass in children at 7 years: follow-up of the DOMInO randomized controlled trial. <i>Prostaglandins Leukot Essent Fatty Acids</i> . 2017.

## 2017 CONFERENCE PRESENTATIONS – INVITED SPEAKER, ORAL AND POSTER:

TYPE (ORAL / POSTER / INVITED)	PRESENTATION INFORMATION (RBWH STAFF IN BOLD)
International poster presentation	<b>Lingwood BL</b> , Al-Theyab N, <b>Donovan T</b> , Eiby YA, <b>Colditz PB</b> (2017) When and why do preterm infants accumulate fat? Growth and Nutrition. Fourth International Conference on Nutrition and Growth. Amsterdam, The Netherlands.
National invited oral presentation	<b>Lingwood BL</b> (2017) Supporting preterm cardiovascular function. Australian Physiological Society, Melbourne, Australia.
Invited poster presentation	Eiby YA, Bjorkman ST, Miller SM, Chand KK, <b>Colditz PB</b> , <b>Lingwood BL</b> (2017) Volume expansion using saline fails to support blood pressure and is associated with white matter injury in preterm piglets. Second annual meeting of the Queensland Perinatal Consortium, Brisbane, Australia.
Invited oral presentation	Dawson PA, <b>Lingwood BE</b> , Eiby YA, Barnes SK, <b>Colditz PB</b> , Boyd RN, Badawi N, Koorts PJ, Kumar S, Flenady VJ, Hurrion EM, (2017) Preterm piglets are a model of sulphate deficiency in the human preterm infant. Second annual meeting of the Queensland Perinatal Consortium, Brisbane, Australia.
National oral presentation	Dawson PA, Eiby YA, Barnes SK, Boyd RN, Badawi N, Koorts PJ, Kumar S, Flenady VJ, Hurrion EM, <b>Colditz PB</b> , <b>Lingwood BE</b> (2018) Preterm piglets are a model of human preterm infant sulphate deficiency. Twenty-second Annual Congress of the Perinatal Society of Australia and New Zealand, Auckland, New Zealand
International Oral	Popat H, Galea C, Evans N, <b>Lingwood B</b> , <b>Colditz P</b> , Halliday R, Greenhalgh M, Malcolm G, Osborn DA. Determinants of cerebral oxygenation in preterm infants <30 weeks. Pediatric Academic Societies (PAS) Meeting, San Francisco, CA, May 6 – 9, 2017.

TYPE (ORAL / POSTER / INVITED)	PRESENTATION INFORMATION (RBWH STAFF IN BOLD)
International Oral	Popat H, Galea C, Evans N, <b>Lingwood B, Colditz P</b> , Halliday R, Greenhalgh M, Malcolm G, Osborn DA. Effect of delayed cord clamping on cerebral oxygenation in preterm infants <30 weeks gestation. Pediatric Academic Societies (PAS) Meeting, San Francisco, CA, May 6 – 9, 2017.
National oral presentation	Al-Theyab NA, <b>Donovan TJ</b> , Eiby YA, <b>Colditz PB, Lingwood BE</b> . When and why do very preterm infants become fat? Annual Congress of the Perinatal Society of Australia and New Zealand, Canberra, ACT, April 2-5, 2017.
National Poster	Dawson PA, <b>Lingwood BE</b> , Eiby YA, Barnes SK, <b>Colditz PB</b> , Boyd RN, Badawi N, <b>Koorts PJ</b> , Kumar S, Flenady VJ, Hurrion EM. Improving health outcomes for preterm infants using a preclinical Pig Translational model (PigTail study). Annual Congress of the Perinatal Society of Australia and New Zealand, Canberra, ACT, April 2-5, 2017.
National oral presentation	Popat H, Galea C, Evans N, <b>Lingwood B, Colditz P</b> , Halliday R, Greenhalgh M, Malcolm G, Osborn DA. Determinants of cerebral oxygenation in preterm infants <30 weeks. Annual Congress of the Perinatal Society of Australia and New Zealand, Canberra, ACT, April 2-5, 2017.
National oral presentation	Popat H, Galea C, Evans N, <b>Lingwood B, Colditz P</b> , Halliday R, Greenhalgh M, Malcolm G, Osborn DA. Effect of delayed cord clamping on cerebral oxygenation in preterm infants <30 weeks gestation. Annual Congress of the Perinatal Society of Australia and New Zealand, Canberra, ACT, April 2-5, 2017.
Invited oral presentation	Wixey JA. Erythropoietin in HIE – what do animal studies tell us? PAEAN Plus: HIE and Neuroprotection symposium. Mater Mothers Hospital, South Brisbane. August 2017
National oral presentation	Wixey JA, Sukumar K, Miller SM, Goasdoue K, <b>Colditz PB</b> , Bjorkman ST, Chand KK. Anti-inflammatory treatment to reduce brain injury in the growth restricted neonate. 31st Annual Fetal and Neonatal Workshop of Australia and New Zealand, Canberra. March 2017
National oral presentation	Sukumar K, Chand KK, Miller SM, Goasdoue K, <b>Colditz PB</b> , Bjorkman ST, Wixey JA. Neuroinflammation in the IUGR piglet model. Queensland Perinatal Consortium, Translational Research Institute, Woolloongabba, Brisbane. July 2017
National Poster	Goasdoue K, Miller SM, Chand KK, Wixey J, <b>Colditz PB</b> , Bjorkman ST. Inflammation and blood-brain barrier disruption occurs rapidly following neonatal hypoxic-ischaemic encephalopathy. Queensland Perinatal Consortium, Translational Research Institute, Woolloongabba, Brisbane July 2017
International poster	Goasdoue K, Miller SM, Chand K, <b>Colditz PB</b> , Bjorkman ST. Changes to BBB following neonatal HIE. BMNN. Killarney, Ireland. 2017
National poster	Bazley S, Miller SM, Chand KK, <b>Colditz PB</b> , Bjorkman ST. Differential expression of the GABAA subunit following neonatal hypoxia-ischemia in the newborn piglet - a novel examination. Queensland Perinatal Consortium, Translational Research Institute, Woolloongabba, Brisbane. 2017
National poster	Doneman A, Miller SM, Chand K, Goasdoue K, <b>Colditz PB</b> , Bjorkman ST. Alterations to the ATP-binding cassette transporter following a hypoxic-ischemic insult. Queensland Perinatal Consortium, Translational Research Institute, Woolloongabba, Brisbane. 2017
National poster	Miller SM, <b>Colditz PB</b> , Bjorkman ST. Developmental changes in expression of GABAA subunits alpha1, 2, 3 in the pig brain. Queensland Perinatal Consortium, Translational Research Institute, Woolloongabba, Brisbane. July 2017
Invited oral presentation	Miller SM, <b>Colditz PB</b> , Bjorkman ST. Developmental expression of GABAA alpha1 and 3 subunits in the pig brain. 31st Annual Fetal and Neonatal Workshop of Australia and New Zealand, Canberra. March 2017
Invited oral presentation	Goasdoue K, Miller SM, Chand K, <b>Colditz PB</b> , Bjorkman ST. Alterations in inflammatory markers in piglets with seizures following hypoxia-ischemia. 31st Annual Fetal and Neonatal Workshop of Australia and New Zealand, Canberra. March 2017
Invited oral presentation	Bjorkman ST (2017) HIE – neurobiology of acute and chronic brain injury. PAEAN Plus: HIE and neuroprotection symposium. Mater Mothers Hospital, Brisbane
Invited oral presentation	Bjorkman ST (2017) Neurobiology of seizures in the developing brain – key things to know. PAEAN Plus: HIE and neuroprotection symposium. Mater Mothers Hospital, Brisbane
Invited oral presentation	Bjorkman ST (2017) The pig as a pre-clinical animal model of neonatal HIE. Perinatal Society of Australia and New Zealand. Canberra, Australia



TYPE (ORAL / POSTER / INVITED)	PRESENTATION INFORMATION (RBWH STAFF IN BOLD)
Invited oral presentation	Bjorkman ST (2017) Does treating neonatal seizures reduce brain injury and improve neurodevelopmental outcomes? Metro North Research Education Session: interactive research workshop - Research Solutions to Clinical Problems. RBWH Brisbane
Poster presentation	Doneman A, Miller SM, Chand KK, Goasdoué K, <b>Colditz PB</b> , Björkman ST. Alterations to the ATP-binding cassette transporters following neonatal hypoxia-ischaemia. 12th International Cerebral Vascular Biology Conference, Melbourne. Nov 28 – Dec 1 2017
Poster presentation	Goasdoue K, Chand K, Miller S, Wixey J, <b>Colditz P</b> , Bjorkman T. Use of a piglet model to detect blood-brain barrier disruption in neonatal disorders. 12th International Cerebral Vascular Biology Conference, Melbourne. Nov 28 – Dec 1 2017
Poster presentation	Kong A, Finnigan S, Ware R, George J, Boyd R, <b>Colditz P</b> . Brain activity assessed using EEG predicts visual function as 3 months of age in very preterm infants. Royal Brisbane and Women's Hospital Symposium. Brisbane, 2017
National poster presentation	Shen K, Fripp J, Pannek K, George J, <b>Colditz P</b> , Boyd R, Rose S. A spatio-temporal atlas of neonatal diffusion MRI based on kernel ridge regression. International Symposium on Biomedical Imaging. Melbourne, Australia. 2017
International poster presentation	Pannek K, Fripp J, George J, Boyd R, <b>Colditz P</b> , Rose S. Automatic detection of volumes affected by subvolume movement. International Society for Magnetic Resonance in Medicine. Honolulu, USA. 2017
National poster presentation	Pannek K, Fripp J, George J, Boyd R, <b>Colditz P</b> , Rose S. Automatic detection of volumes affected by subvolume motion in diffusion weighted imaging. International Symposium on Biomedical Imaging. Melbourne, Australia. 2017
International poster presentation	George J, Fiori S, Fripp J, Pannek K, Guzzetta A, Coulthard A, Ware R, Rose S, <b>Colditz P</b> , Boyd R. Brain structure at 29–35 weeks postmenstrual age is related to cognitive outcomes at 12 months corrected age in infants born very preterm. 29th European Academy of Childhood Disability Conference. Amsterdam, The Netherlands. 2017
International paper presentation	George J, Fiori S, Fripp J, Pannek K, Guzzetta A, Coulthard A, Ware R, Rose S, <b>Colditz P</b> , Boyd R. New structural MRI scoring system at 29-35 weeks postmenstrual age is associated with motor outcomes at 12 months corrected age in infants born very preterm. 29th European Academy of Childhood Disability Conference. Amsterdam, The Netherlands. 2017
International oral presentation	Boyd R, Fiori S, Guzzetta A, George J, Pannek K. PPREMO Toolbox: Very Early Brain Structure and Function to predict Motor and Brain outcomes in infants born preterm. 29th European Academy of Childhood Disability Conference. Amsterdam, The Netherlands. 2017

## OTHER COMMUNICATIONS AND OUTPUTS:

Paul Colditz and Simon Finnigan media release:

[HTTPS://WWW.UQ.EDU.AU/NEWS/ARTICLE/2017/05/BABIES'-SLOW-BRAIN-WAVES-COULD-PREDICT-PROBLEMS](https://www.uq.edu.au/news/article/2017/05/babies-slow-brain-waves-could-predict-problems)

Paul Colditz UQ Medicine Magazine:

[HTTPS://SHORTHAND.UQ.EDU.AU/MEDICINE/COULD-STEM-CELLS-REPAIR-BRAIN-INJURIES-IN-BABIES/](https://shorthand.uq.edu.au/medicine/could-stem-cells-repair-brain-injuries-in-babies/)

Harcourts Foundation Butterfly Ball, Hilton, Brisbane. November 2017

# OBSTETRICS & GYNAECOLOGY SERVICES

The Department of Obstetrics and Gynaecology continues to increase its activity and 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
- Young Parents Program
- Team midwifery models in conjunction with obstetric care
- Midwifery group practice
- Eligible Private Practice Midwives
- Inpatient Unit and Lactation Service.
- General gynaecology
- Obstetric Medicine Services and Obstetric Telehealth Services
- General Practitioner Maternity shared care program
- Multidisciplinary BRAC 1 clinic
- Statewide paediatric and adolescent gynaecology
- Prolapse and incontinence surgery
- Gestational trophoblastic disease
- Endocrine Service
- Reproductive Endocrinology and Infertility services
- Early pregnancy assessment unit
- Acute and emergency gynaecological care
- Colposcopy

Maternity Services collaborate closely with the Perinatal Research Centre, University of QLD and UQCCR for ongoing multi-centre research projects. The Maternal Fetal Medicine unit provides a comprehensive and competitive environment for prospective and retrospective research and audits as well as undertaking collaborative research with other centres in Australia and New Zealand. The unit has published two 10 year reviews looking at extreme preterm breech and outcomes and a review of stillbirths at RBWH. The unit has also collaborated with the anaesthetics department on maternal subcutaneous fat and outcomes.

The Statewide Paediatric and Adolescent Gynaecology Service, which is based at RBWH has received numerous research grants, both QLD and Commonwealth. The unit is active in research and presents and publishes internationally. The unit provides an outreach services to the Lady Cilento Children's Hospital.

Associate 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.

Reproductive endocrinology and infertility is a division of the Department of Gynaecology. Professor Hayden Homer the Christopher Chen Chair in Reproductive Medicine at UQ has established Queensland's first Oocyte Biology Research Laboratory situated in the UQCCR. Professor Homer is the director of the lab and his research is funded by 3 NHMRC Grants worth over \$1.7M. A major aspect of his research seeks to better understand the molecular determinants of oocyte quality and to identify pathways that could be amenable to modification for reversing poor oocyte quality. This knowledge will improve the efficiency of IVF with associated reduction in risks and costs to patients. Another major objective of this research is to develop novel and less invasive approaches for female fertility preservation. Increasing cancer survivorship has increased the numbers of reproductively-aged women who survive their disease and are desirous of pregnancy. The research unit is developing agents that can possibly be administered as a simple pill to increase oocyte resilience to chemotoxicity thereby preserving fertility (termed oncofertility).

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

## SUPERVISED POST-GRADUATE RESEARCH STUDENTS

NAME (RBWH STAFF IN BOLD)	CURRENT STUDIES (E.G. PHD, MASTERS ETC.) UNIVERSITY (DURATION)	RESEARCH PROJECT TITLE	SUPERVISORS (RBWH STAFF IN BOLD)
<b>Angela North</b>	Masters	Masters of Philosophy, Anticoagulation in pregnancy	<b>Karin Lust, Karen Whiffeld, Helen Barrett</b>
Goutham Subramanian	PhD, UQ (2016-2019)	The role of single-strand binding proteins in repair of DNA damage and oocyte quality	<b>Hayden Homer, Kum Kum Khanna</b>
Jessica Greaney	PhD, UQ (2017-2020)	The role of Sirtuin 1 in oocyte development and female fertility	<b>Hayden Homer, Carlos Salomon-Gallo</b>
Juvita DeLancy	PhD, UQ (2017-2019)	Sirtuin 3 regulation of oocyte quality in obesity and during ageing	<b>Hayden Homer, Carlos Salomon-Gallo</b>
Mohammed Altaf	PhD, UQ (2017-2019)	The role of Sirtuin 3 in male fertility and spermatogenesis	<b>Hayden Homer, Martin Lavin</b>
Pia Astbury	Honours, UQ (2017-2018)	Oxidative stress in human oocytes	<b>Hayden Homer</b>
Ameer Alhusuny	PhD, UQ (2017-2021)	(Factors associated with neck/shoulder and vision symptoms in surgical teams performing Minimally Invasive Surgeries (MIS) in Australia	<b>Akram Khalil</b>

## 2017 RESEARCH POSITIONS: COORDINATORS, FELLOW, ADJUNCT AND HONORARY POSITIONS

NAME	TYPE OF FELLOWSHIP	RESEARCH PROJECT	UNIVERSITY (YEARS)
<b>Hayden Homer</b>	Christopher Chen Chair of Reproductive Medicine	Director of Christopher Chen Oocyte Biology Research Laboratory, UQCCR, Faculty of Medicine	UQ (2016-current)
Rebecca Kimble	Associate Professor	Faculty of Medicine	University of Queensland 2007-current
Rebecca Kimble	Adjunct Associate Professor	Faculty of Health Sciences	Queensland University of Technology
Karin Lust	Associate Professor	Faculty of Medicine	University of Queensland 2014-current
Akwasi Amoako	Senior Lecturer	Faculty of Medicine	University of QLD 2017- ongoing

## 2017 CURRENT RBWH RESEARCH GROUP / DEPARTMENT LED RESEARCH ACTIVITY

RBWH RESEARCH GROUP / DEPARTMENT LEAD RESEARCHERS	COLLABORATIVE RESEARCHERS	RESEARCH PROJECT TITLE
<b>Dr Julie Lee, Dr Amy Krepska, Dr Claire Manning, Dr Victoria Eley, A/ Professor Kerstin Wysusek, A/ Professor Paul Gray, Professor Andre van Zundert, A/Professor Rebecca Kimble, Dr John Rowell, Professor Leonie Callaway</b>		ROTEM thromboelastometry in pre-eclamptic obstetric patients: a prospective observational study on labour ward inpatients
<b>Andreas Obermair</b>	<b>Keisuke Tanaka,</b> Lars Eriksson	Incidence of adverse events in gynaecological hospital admissions: A systematic review
<b>Karen Baker</b>	<b>Mike Beckmann</b>	PINC trial - Prostaglandin Inpatient iNduction of labour Compared with BALLOon Outpatient iNduction of labour: a randomised controlled trial
<b>Yogesh Chadha</b>	Vicky Flenady	My Baby's Movements: a stepped wedge cluster randomised controlled trial to raise maternal awareness of fetal movements during pregnancy
<b>Renuka Sekar</b>	Katie Groom	Childhood Outcomes of STRIDER NZAus: a randomised controlled trial of sildenafil therapy in dismal prognosis early-onset intrauterine growth restriction (New Zealand and Australia).
<b>Dr.A.Amoako, Dr.R.Sekar</b>	<b>Dr.C.Lehner and Ahn Nguyen</b>	Review of preterm births and cost for period of admission – audit followed by a Prospective study to use modalities to reduce admission –
<b>Thangeswaran Rudra, Akwasi Amoako</b>	Dr Umesha Pathmanathan, Dr Rachel Wilkinson	Reduced Foetal Movements and Maternal and Foetal Outcomes
Hayden Homer	<b>Hayden Homer (RBWH)</b> Prof Martin Lavin (UQ)	Senataxin-mediated repair of DNA damage during oocyte development
Hayden Homer	<b>Hayden Homer (RBWH)</b> Prof Kum Kum Khanna (QIMR)	Role of single strand binding proteins in DNA repair and oocyte quality
Hayden Homer	Hayden Homer (RBWH) Prof Greg Rice (UQ) Dr Carlos Salomon-Gallo (UQ)	Oocyte- and Embryo-derived exosome signalling
Hayden Homer	<b>Hayden Homer (RBWH)</b> Prof David Sinclair (Harvard University) Dr Lindsay Wu (UNSW)	Role of Sirtuin 2 and NAD in oocyte quality during ageing and chemotherapy
Hayden Homer	<b>Hayden Homer (RBWH)</b> Queensland Fertility Group	Human oocyte quality
Hayden Homer	<b>Hayden Homer (RBWH)</b> Dr Sam Hollingworth (UQ) Prof Mieke van Driel (UQ) Dr Treasure McGuire (UQ)	Medicine use for fertility treatments in Australia
Akwasi Amoako	<b>Akwasi Amoako (RBWH)</b> <b>Hayden Homer (RBWH)</b> Queensland Fertility Group Dr Tim Marczylo & Dr Emma Marczylo, Public Health England, Oxford, UK	The impact of environmental toxicants on spermatozoal miRNA profiles; consequences for the developing embryo and the potential transgenerational epigenetic changes and adverse effects in the offspring.

## 2017 COLLABORATIVE RESEARCH ACTIVITY INVOLVING RBWH RESEARCH GROUP / DEPARTMENT

COLLABORATIVE LEAD RESEARCHERS	RBWH RESEARCHERS	RESEARCH PROJECT TITLE
UQCCR – Carlos Solomon	Assoc.Prof.Greg Duncombe, Dr.C.Lehner, Dr.R.Sekar	Use of exosomes in predicting pregnancy outcomes

## 2017 RESEARCH AWARDS AND ACHIEVEMENTS

RECIPIENT	AWARD	EVENT
Emma Borg, T Bagchi, Rebecca Kimble	Prize winner Paediatric and Adolescent Gynaecology session	RCOG World Congress Cape Town March 2017
Alexandra Mowat	RANZCOG Research Scholarship – USGA for polycaplarone study as potential scaffold for prolapse surgery	

## 2017 RESEARCH GRANTS - AWARDED

INVESTIGATORS (RBWH STAFF IN BOLD)	RBWH RESEARCH GROUPS / DEPARTMENTS	PROJECT TITLE	GRANTING BODY	AMOUNT IN 2017	TOTAL AMOUNT (YEARS)
<b>Dr Julie Lee, Dr John Rowell, A/ Professor Rebecca Kimble</b>	Anaesthesia, Obstetrics, Haematology	ROTEM thromboelastometry in pre-eclamptic obstetric patients: a prospective observational study on labour ward inpatients	Department of Anaesthesia Research Fund, RBWH In kind support Haematology RBWH	\$13,000	Approx \$150,000 \$13,000
<b>Hayden Homer (CIA)</b> David Sinclair (CIB) Lindsay Wu (CIC)	Oocyte Biology Research Lab, UQCCR/Laboratory for Ageing, UNSW	Nicotinamide adenine dinucleotide (NAD <sup>+</sup> )-raising agents for improving oocyte quality	NHMRC commercial partner (JumpStart Fertility)	\$37,446	\$149,785 (2017-2018)
<b>Hayden Homer (CIA)</b> David Sinclair (CIB) Lindsay Wu (CIC)	Oocyte Biology Research Lab, UQCCR/Laboratory for Ageing, UNSW	Nicotinamide adenine dinucleotide (NAD <sup>+</sup> )-raising agents for improving oocyte quality	NHMRC	\$149,552	\$445,827.00 (2017-2019)
<b>Hayden Homer (CIA)</b> David Sinclair (CIB) Lindsay Wu (CIC)	Oocyte Biology Research Lab, UQCCR/Laboratory for Ageing, UNSW	Female reproductive health preservation by Nicotinamide Adenine Dinucleotide (NAD <sup>+</sup> ) and Sirtuin2 (SIRT2)	NHMRC	\$143,661	\$410,983.00 (2016-2018)



INVESTIGATORS (RBWH STAFF IN BOLD)	RBWH RESEARCH GROUPS / DEPARTMENTS	PROJECT TITLE	GRANTING BODY	AMOUNT IN 2017	TOTAL AMOUNT (YEARS)
<b>Hayden Homer (CIA)</b> Robert Gilchrist (CIB) John Carroll (CIC) William Ledger (CID)	Oocyte Biology Research Lab, UQCCR/School of Women's & Children's Health, UNSW/Monash University	A BubR1-centred network for non-invasively measuring human oocyte quality	NHMRC	\$173,538	\$515,615.50 (2015-2017)
<b>Rebecca Kimble</b>	Dept O & G WNS	Queensland Clinical Guidelines Program	Queensland Health	\$750,000	\$3,500,000 (2014 – 2019)
<b>Rebecca Kimble</b>	Dept O & G WNS	Commonwealth Government Specialist Training Program (STP) Paediatrics & Adolescent Gynaecology	Australian Government	\$110,000	\$110,000 (2011 – current)
<b>Rebecca Kimble</b>	Dept O & G WNS	New specialist to sustain the Statewide Paediatric and Adolescent Gynaecology service	Queensland Health	\$380,000	\$380,000 recurrent (2012 - current)
<b>Rebecca Kimble</b>	Dept O & G WNS	Perinatal Mental Health Project	Queensland Health	\$150,000	\$450,000 (2015 – 2017)
<b>Rebecca Kimble</b>	Dept O & G WNS	NeoResus Education Project	Queensland Health	\$150,000	\$450,000 (2015 – 2017)
<b>Rebecca Kimble</b>	Dept O & G WNS	Fellow Training Statewide Paediatric and Adolescent Gynaecology	Commonwealth Department of Health	\$20,000	\$120,000 (2011 – 2016)
<b>Rebecca Kimble</b>	Dept O & G WNS	Fellow Training Statewide Paediatric and Adolescent Gynaecology	Commonwealth Department of Health	\$110,000	\$110,000 (2016)
<b>Rebecca Kimble</b>	Dept O & G WNS	Imminent Birthing Education for non-birthing units and practitioners	Department of Health	\$275,000	\$275,000 (2015 – 2017)
<b>Rebecca Kimble</b>	Dept O & G WNS	Queensland Neonatal Services Advisory Group	Department of Health	\$150,000	\$450,000 (2015 – 2017)

## 2017 RESEARCH PUBLICATIONS

TYPE (JOURNAL ARTICLE / BOOK / BOOK CHAPTER / LETTER)	PUBLICATION INFORMATION (RBWH STAFF IN BOLD)
Journal Article	Greaney J, Wei Z, <b>Homer H</b> Regulation of chromosome segregation and the cellular basis for female meiotic errors December 2017 doi: 10.1093/humupd/dmx035
Journal Article	<b>Brown H, Barrett H, Lee J, Pincus J, Kimble RM, Eley V</b> Successful Resuscitation of Maternal Cardiac Arrest with Disseminated Intravascular Coagulation Guided by Rotational Thromboelastometry and Transesophageal Echocardiography: a Case report e-publication November 2017 in journal Cases-anaesthesia-analgesia.org

TYPE (JOURNAL ARTICLE / BOOK / BOOK CHAPTER / LETTER)	PUBLICATION INFORMATION (RBWH STAFF IN BOLD)
Journal Article	<b>Williams M, Bagchi T, Kimble RMN.</b> Menstrual Suppression by Mirena IUD insertion in Adolescents with Disabilities: Using USS Measures of Uterine Cavity Length to Predict procedural Success. <i>Journal of Pediatric and Adolescent Gynecology</i> 30 ( 2017) 304
Journal Article	<b>Coghill E, Kimble RMN</b> Laparoscopic Hemi-Hysterectomy for an Obstructed Uterine Horn- Experience from a statewide Quaternary Paediatric and Adolescent Gynaecology & Congenital Anomalies Service, Queensland Australia.. <i>Journal of Pediatric and Adolescent Gynecology</i> 30 ( 2017) 312
Journal Article	<b>Wee A, Kimble RMN</b> Creation and Maintenance of Neo-Vagina with the use of Vaginal Dilators as First Line treatment- Results froma Quaternary Pediatric and Adolescent Gynecology Service in Australia.. <i>Journal of Pediatric and Adolescent Gynecology</i> 30 ( 2017) 286
Journal Article	<b>Borg E, Bhadange S, Bagchi T, O'Rourke P, Kimble RM</b> Concordance of Magnetic Resonance Imaging with Final diagnosis in Mullerian Duct Anomalies: a Twelve Year Study from an Australian Quaternary Paediatric and Adolescent Gynaecology Centre.. <i>Journal of Pediatric and Adolescent Gynecology</i> 30 ( 2017) 284
Journal article	Draheim, T and <b>Baker, K.</b> Trauma during Pregnancy. <i>O&amp;G Magazine</i> . Volume 19 No.2 Winter 2017
Journal article	Vasa previa diagnosis, clinical practice and outcomes in australia, Sullivan, Elizabeth; Javid, Nasrin; <b>Duncombe, Gregory;</b> Li,Zhuoyang; Safi, Nadom; Cincotta, Robert; Homer, Caroline; Halliday, Lesley and Oyelese, Yinka. <i>Obstetrics and Gynecology</i> 2017 Sept 130(3)
Journal article	Low first-trimester papp-a in ivf (fresh and frozen-thawed) pregnancies, likely due to a biological cause, Lauren P. Hunt, A. M. McInerney-Leo, S. Sinnott, B. Sutton, R. Cincotta, <b>G. Duncombe,</b> J. Chua AND M.Peterson. <i>J Assist Reprod Genet</i> 2017 July DOI 10.1007/s10815-017-0996-1
Journal article	Health care experiences among women diagnosed with gestational breast cancer. Karin Hammarberg, Elizabeth Sullivan, Nasrin Javid, <b>Greg Duncombe,</b> Lesley Elizabeth Halliday, Frances Boyle, Christobel M Saunders, Angela Ives, Jan E Dickinson and J.R.W Fisher. <i>European Journal of Cancer Care</i> , 2017 Mar 24. doi: 10.1111/ecc.12682.
Journal article	Next-generation mirna sequencing reveals that exosomes in maternal circulation of gestational diabetes pregnancies regulate glucose metabolism in placental cells Adam, Stefanie, Guanzon, Dominic, Scholz-Romero, Katherin, Elfeky, Omar, Longo, Sherri, Lai, Andrew, <b>Duncombe, Gregory,</b> Rice, Gregory E., Lappas, Martha and Salomon, Carlos (2017). 64th Annual Scientific Meeting of the Society-for-Reproductive-Investigation (SRI), Orlando, FL, United States, (217A-217A). 15-18 March 2017. doi:10.1177/1933719117699773
Journal article	Maternal bmi regulates the exosome bioactivity on cytokine release from endothelial cells. Elfeky, Omar, Longo, Sherri, Lai, Andrew, <b>Duncombe, Gregory,</b> Rice, Gregory E. and Salomon, Carlos (2017). 64th Annual Scientific Meeting of the Society-for-Reproductive-Investigation (SRI), Orlando, FL, United States, (120A-120A). 15-18 March 2017. doi:10.1177/1933719117699773
Journal article	Mode of delivery in singleton extreme preterm breech babies and outcomes ANZJOG, Dr.F.Hill, <b>Dr.R.Sekar</b>
Book Chapter	<b>Amoako AA,</b> Nafee TM, Ola B. Epigenetic Influences during the Periconception Period and Assisted Reproduction. In <i>Periconception in Physiology and Medicine. Advances in Experimental Medicine and Biology Book Series (AEMB, Volume 1014 2017):</i> Alireza Fazeli and William V. Holt (Editors) Springer-Verlag, Cham, 2017, pages 15-39.
Book Chapter	Kayes O, <b>Amoako A.</b> Sperm Retrieval. In <i>Oxford Textbook of Urological Surgery.</i> Freddie C. Hamdy and Ian Eardley (Editors). Oxford University Press, Oxford, 2017, Pages 849-853.
Journal article	<b>Sekar, Renuka</b> Pels, A. et al. <i>BMC Pregnancy and Childbirth</i> 17: 2017. STRIDER (Sildenafil TheRapy in dismal prognosis early onset fetal growth restriction): An international consortium of randomised placebo-controlled trials

## 2017 CONFERENCE PRESENTATIONS – INVITED SPEAKER, ORAL AND POSTER:

TYPE (ORAL / POSTER / INVITED)	PRESENTATION INFORMATION (RBWH STAFF IN BOLD)
Oral	Subramanian G, Greaney J, Wei Z, Becherel O, Lavin M, <b>Homer H</b> Premature ovarian insufficiency in the absence of Senataxin Society for Reproductive Biology Annual Conference, August 2017, Perth
Oral	Ho WH, Listijono D, Li S, Sinclair D, <b>Homer H</b> , Wu L Preservation of female reproduction from cancer treatment through manipulation of NAD+ Society for Reproductive Biology Annual Conference, August 2017, Perth
Oral	Zhou C, Greaney J, Debottam K, Khanna KK, <b>Homer H</b> Cep55 couples proteolysis with anaphase and interkinesis in oocytes Society for Reproductive Biology Annual Conference, August 2017, Perth
Oral	Wu L, Ho WH, Listijono D, Bertoldo M, Li N, Youngson N, Braidy P, Kordowitzki P, Turner N, Morris M, Gilchrist R, Walters K, Sinclair D, <b>Homer H</b> Protection and restoration of female fertility during gonadotoxic chemotherapy by elevating NAD+ Society for Reproductive Biology Annual Conference, August 2017, Perth
Poster	Wei T, <b>Homer H</b> Cyclin B1 is controlled at the translational level in small oocytes from pre-antral follicles Society for Reproductive Biology Annual Conference, August 2017, Perth
Poster	Altaf M, McGuire T, van Driel M, Hollingworth S, <b>Homer H</b> Anovulatory infertility in Australia: A retrospective analysis of medicine use and health outcomes ASCEPT APSA Annual Scientific Meeting, December 2017, Brisbane
Invited	<b>Homer H</b> Ageing and eggs: can we reverse the age-related decline in egg quality. Public Lecture on Age, Fertility and Advancements in Reproductive Medicine, January 2017 Singapore
Invited	<b>Homer H</b> New developments for reversing ageing effects on female fertility ACRM Symposium on Advances in Reproductive Medicine, November 2017, Singapore
Poster	<b>Angela North, Karen Whitfield, Karin Lust, Helen Barrett.</b> Therapeutic Heparin in the Obstetric Patient - SOMANZ 2017. Canberra.
Oral	Investigating Unexplained Stillbirth and Improving Care - a retrospective study at the Royal Brisbane and Women's Hospital (RBWH), <b>Christoph Lehner, Renuka Sekar</b> PSANZ Canberra 2017
Poster	Investigating Unexplained Stillbirth and Improving Care - a retrospective study at the Royal Brisbane and Women's Hospital (RBWH), <b>Christoph Lehner, Renuka Sekar</b> , RBWH Symposium September 2017
Poster	<b>Amanda Harry</b> Health service provision of contraceptive care for women attending drug and alcohol treatment services: A retrospective study. RBWH Symposium September 2017
Poster	<b>Angela North</b> Therapeutic heparin during the peri partum period – challenges associated with safe use. RBWH Symposium September 2017
Oral	<b>Victoria Eley</b> Epidural extension failure in women with class iii obesity is comparable to that of non-obese women. a prospective two-centre cohort study. rbwh Symposium September 2017
Oral	<b>Victoria Eley</b> Interpretation of care guidelines for obese women in labour: intergroup language and social identity. RBWH Symposium September 2017
Poster	<b>Elise Coghill</b> 10 years of experience with scar ectopic pregnancies at the royal brisbane and womens hospital. RBWH Symposium September 2017
Poster	<b>Elise Coghill</b> Severe inflammation, adhesion formation and pain in response to the use of floseal for haemostasis during laparoscopic surgery. RBWH Symposium September 2017
Poster	Hilary Jimmieson high maternal weight and excess weight gain in pregnancy, does weight play a role? RBWH Symposium September 2017
Poster	<b>Karen Whitfield</b> Maternity outpatient department clinic – a new role for the women's and newborns pharmacist. RBWH Symposium September 2017
Poster	<b>Pinar Cingilogu</b> Repeat course of antenatal corticosteroids. rbwh symposium september 2017
Poster	<b>Pinar Cingilogu</b> Case study: live delivery of triploid fetus and healthy co-twin. RBWH Symposium September 2017
Poster	<b>Priyanka Kosanam</b> Naturally conceived heterotopic pregnancy. RBWH Symposium September 2017
Poster	<b>Rebecca Christensen</b> Does cefazolin prophylaxis during elective bariatric caesarean section achieve therapeutic concentrations in plasma and interstitial fluid?

TYPE (ORAL / POSTER / INVITED)	PRESENTATION INFORMATION (RBWH STAFF IN BOLD)
Poster	<b>Susan De Jersey</b> Previous weight management experiences are important: lifestyle specific health cognitions associated with excess gestational weight gain. RBWH Symposium September 2017
Poster	<b>Amanda Harry</b> Health service provision of contraceptive care for women attending drug and alcohol treatment services: A retrospective study. RBWH Symposium September 2017
Oral	<b>Khalil, Akram</b> The new cervical screening program. Why should we know about it. RBWH Symposium September 2017.
Oral	<b>Khalil, Akram</b> Australian Gynaecology Endoscopic Surgery AGES March 2017 (formation and pain in response to the use of floseal for haemostasis during laparoscopic surgery)



# OBSTETRIC MEDICINE

The Department of Obstetric Medicine conducts research focussed on the health care of women with complex pregnancies. The aim is to improve outcomes for these women and their babies. The department is involved in a number of collaborative research projects including a large NHMRC funded study evaluating the guided treatment of asthma in pregnancy. Other research studies focus on maternal metabolism, in particular lipids and ketones in pregnancy, diabetes and dietetic interventions for pregnant women with diabetes and anaesthetic issues in women with obesity complicating pregnancy.

The department has been active in presenting its work at multiple conferences with eight oral and four poster presentations conducted throughout the year. In addition to this, the department has published 14 journal articles and 1 book chapter. Two highlights for the year were the completion of three higher research degrees in the department and being awarded a metro north research excellence award.

## SUPERVISED POST-GRADUATE RESEARCH STUDENTS

NAME (RBWH STAFF IN BOLD)	CURRENT STUDIES (E.G. PHD, MASTERS ETC.) UNIVERSITY (DURATION)	RESEARCH PROJECT TITLE	SUPERVISORS (RBWH STAFF IN BOLD)
<b>Dr Helen Robinson</b>	PhD, UQ (2015 – ongoing)	Carbohydrate restriction in the management of gestational diabetes mellitus	<b>Leonie Callaway, Marloes Dekker Nitert, Helen Barrett</b>
<b>Dr Fiona Britten</b>	PhD, UQ (2014 – ongoing)	Breastfeeding in women with type 2 diabetes	<b>Emma Duncan, Leonie Callaway</b>
<b>Angela North</b>	Masters, UQ (2016 – ongoing)	Therapeutic heparin antenatal and peripartum	<b>Karin Lust, Karen Whitfield, Helen Barrett</b>
<b>Dr Victoria Eley</b>	Completed PhD, UQ (2015-2017)	Clinical guidelines relating to the anaesthetic management of obese parturients: An evaluation of their clinical utility and supporting evidence	<b>Leonie Callaway</b>
Luisa Gomez Arango	Completed PhD, UQ (2014-2017)	Microbiome in pregnancy	<b>Leonie Callaway, Marloes Dekker Nitert</b>
Dr Kristine Matusiak	Completed MPhil (2012-2017)	Effects of preconception weight loss on the HRA axis	<b>Leonie Callaway, Marloes Dekker Nitert</b>

## 2017 RESEARCH POSITIONS: COORDINATORS, FELLOW, ADJUNCT AND HONORARY POSITIONS

NAME	TYPE OF FELLOWSHIP	RESEARCH PROJECT	UNIVERSITY (YEARS)
<b>Helen Barrett</b>	National Health Medical Research Council Early Career Fellowship	Maternal metabolism in diabetes in pregnancy	2017-2020
<b>Katie Foxcroft</b>	Adjunct Fellow	Clinical Trial Coordinator	University of Queensland ( current)



NAME	TYPE OF FELLOWSHIP	RESEARCH PROJECT	UNIVERSITY (YEARS)
<b>Felicity Stalley</b>	Research Nurse	Clinical Trials	University of Queensland ( current
<b>Annelise Kirkham</b>	Research Nurse	Clinical Trials	University of Queensland ( current)

## 2017 CURRENT RBWH RESEARCH GROUP / DEPARTMENT LED RESEARCH ACTIVITY

RBWH RESEARCH GROUP / DEPARTMENT LEAD RESEARCHERS	COLLABORATIVE RESEARCHERS	RESEARCH PROJECT TITLE
<b>Leonie Callaway</b>	Lynda Ross, <b>Taylor Guthrie, Jeanette Tyler, Nickie Moreton, Karen New, Janelle Laws, Susie de Jersey</b>	Evaluation of workforce training to support Healthy Pregnancy Healthy Baby
<b>Leonie Callaway</b>	<b>Taylor Guthrie, Jeanette Tyler, Nicki Moreton, Karen New, Susie de Jersey</b>	Efficacy of a low intensity consumer held pregnancy weight monitoring tool to prevent excess gestational weight gain
<b>Leonie Callaway</b>	Elizabeth Eakin, Shelly Wilkinson, Tracy Comans, <b>Claire Gardiner, Hilary Jimmison, Taylor Guthrie, Susie de Jersey</b>	Implementation evaluation of a telephone-delivered dietetic model of care for overweight pregnant women

## 2017 COLLABORATIVE RESEARCH ACTIVITY INVOLVING RBWH RESEARCH GROUP / DEPARTMENT

COLLABORATIVE LEAD RESEARCHERS	RBWH RESEARCHERS	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

## 2017 RESEARCH AWARDS AND ACHIEVEMENTS

RECIPIENT	AWARD	EVENT
Obstetric Medicine Research Team	Metro North Research Excellence Award 2017	Metro North Hospital and Health Service Research Excellence Awards 2017

## 2017 RESEARCH GRANTS - AWARDED

INVESTIGATORS (RBWH STAFF IN BOLD)	RBWH RESEARCH GROUPS / DEPARTMENTS	PROJECT TITLE	GRANTING BODY	AMOUNT IN 2017	TOTAL AMOUNT (YEARS)
Murphy V, Gibson P, Hensley M, Mattes J, Giles W, Peek M, Bisits A, <b>Callaway L</b> , McCaffery K, <b>Barrett H</b> .	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	\$1,647,906 (2014-2018)
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	\$487,273 (2017-2019)
<b>Barrett HL</b> , Dekker Nitert M, <b>Callaway LK</b> , McIntyre HD, Morrison, M	Obstetric medicine	Linking maternal and infant oral microbiome: effects of GDM or effects of probiotics?	Diabetes Australia Research Program Grant	\$65,439	\$65,439 (2017)
<b>Callaway L</b>	Obstetric medicine	Antibiotics in pregnancy: unintended effects on the microbiome, maternal metabolism and infant body composition	Royal Brisbane and Women's Hospital Research Project Grant.	\$40,000	\$40,000 (2017)
Richard K, <b>Barrett HL</b> , <b>D'Emden M</b>	Obstetric medicine	The role of the high density lipoprotein receptor scavenger receptor class B member 1 (SRB1) in placental uptake of thyroid hormone	Pathology Queensland – Study, Education and Research Committee	\$50,000	\$50,000 (2017)
Regan AK, Andrews RM, Moore HC, Binks MJ, McHugh L, Pereira G, Blyth CC, Van Buynder PG, <b>Lust K</b>	Obstetric medicine	Influenza and pertussis vaccine effectiveness in pregnancy	National Health and Medical Research Council	\$676,333.20	\$676,333.20

## 2017 RESEARCH PUBLICATIONS

TYPE (JOURNAL ARTICLE / BOOK / BOOK CHAPTER / LETTER)	PUBLICATION INFORMATION (RBWH STAFF IN BOLD)
Journal Article	Achong N, <b>Duncan EL</b> , McIntyre HD, <b>Callaway L</b> . The physiological and glycaemic changes in breastfeeding women with type I diabetes mellitus. Diabetes Res Clin Pract. 2017 Nov 14;135:93-101.
Journal Article	<b>Callaway L</b> , <b>Eley V</b> . Obesity and complications from neuraxial analgesia – we need to know more. Paediatr Perinat Epidemiol. 2017 Nov;31(6):506-508.

TYPE (JOURNAL ARTICLE / BOOK / BOOK CHAPTER / LETTER)	PUBLICATION INFORMATION (RBWH STAFF IN BOLD)
Journal Article	Carter HE, Winch S, Barnett AG, Parker M, Gallois C, Willmott L, White BP, Patton MA, Burrige L, Salkield G, Close E, <b>Callaway L</b> , Graves N. Incidence, duration and cost of futile treatment in end of life hospital admissions to three Australian public-sector tertiary hospitals: a retrospective multicentre cohort study. <i>BMJ Open</i> . 2017 Oct 16;7(10)
Journal Article	<b>Barrett HL, Callaway LK</b> . Hypertensive disorders of pregnancy. <i>BMJ</i> . 2017 Jul 13;358:j3245.
Journal Article	Gomez-Arango LF, <b>Barrett HL</b> , McIntyre HD, <b>Callaway LK</b> , Morrison M, Nitert MD. Contributions of the maternal oral and guy microbiome to placental microbial colonization in overweight and obese pregnancy women. <i>Sci Rep</i> . 2017 Jun 6;7(1):2860.
Journal Article	Humphrey MD, <b>Foxcroft KF, Callaway LK</b> . Obstetric risk score – revalidated for triaging high-risk pregnancies in rural areas. <i>Aust N Z J Obstet Gynaecol</i> . 2017 Feb;57(1):63-67.
Journal Article	Gomez-Arango LF, <b>Barrett HL</b> , McIntyre HD, <b>Callaway LK</b> , Morrison M, Dekker Nitert M. Antibiotic treatment at delivery shapes the initial oral microbiome in neonates. <i>Sci Rep</i> . 2017 Feb 27;7:43481.
Journal Article	<b>de Jersey SJ</b> , Mallan KM, <b>Callaway LK</b> , Daniels LA, Nicholson JM. Prospective relationships between health cognitions and excess gestational weight gain in a cohort of health and overweight pregnancy women. <i>J Acad Nutr Diet</i> . 2017 Aug;117(8):1198-1209.
Journal Article	Brown H, <b>Barrett HL</b> , Lee J, Pincus JM, Kimble RM, Eley VA. Successful Resuscitation of Maternal Cardiac Arrest With Disseminated Intravascular Coagulation Guided by Rotational Thromboelastometry and Transesophageal Echocardiography: A Case Report. 2017 Oct 26 AA Case Rep
Journal Article	<b>de Jersey SJ</b> , Mallan K, <b>Callaway L</b> , Daniels LA, Nicholson JM. A cross sectional comparison of predisposing, reinforcing and enabling factors for lifestyle health behaviours and weight gain in healthy and overweight pregnancy women. <i>Matern Child Health J</i> . 2017 Mar;21(3):626-635.
Journal Article	Gomez-Arango, L.F., <b>Barrett, H.L.</b> , Wilkinson, S.A., <b>Callaway, L.K.</b> , McIntyre, H.D., Morrison, M., Dekker Nitert, M. (2017) Low dietary fiber intake increases Collinsella abundance in the gut microbiota of overweight and obese pregnant women. <i>Gut Microbes</i> doi: 10.1080/19490976.2017.1406584
Journal Article	Kevat D, Chen M, Wyld D, Fagermo N, <b>Lust K</b> . A case of pulmonary carcinoid in pregnancy and review of carcinoid tumours in pregnancy. <i>Obstet Med</i> . 2017 Sep;10(3):142-149.
Journal Article	Bowyer L, <b>Robinson HL, Barrett H</b> , Crozier TM, Giles M, Idel I, Lowe S, Lust K, Marnoch CA, Morton MR, Said J, Wong M, Makris A. SOMANZ guidelines for the investigation and management sepsis in pregnancy. <i>Aust N Z J Obstet Gynaecol</i> . 2017 Oct; 57(5): 540-551.
Journal Article	<b>Robinson HL, Barrett H, Foxcroft K, Callaway L</b> , Dekker Nitert M. Prevalance of maternal urinary ketones in pregnancy in overweight and obese women. <i>Obstet Med</i> 2017 Dec 5
Book chapter	McIntyre HD, Dekker-Nitert M, <b>Barrett HL, Callaway LK</b> . Obesity and Diabetes in Pregnancy. In <i>A Practical Manual of Diabetes in Pregnancy</i> , Second Edition. Edited by David McCance. Published 2018 by John Wiley and Sons, Ltd. Pages 87-101.

## 2017 CONFERENCE PRESENTATIONS – INVITED SPEAKER, ORAL AND POSTER:

TYPE (ORAL / POSTER / INVITED)	PRESENTATION INFORMATION (RBWH STAFF IN BOLD)
Oral	<b>Beech A, Craven AM</b> . The utility of albumin infusion in sub-nephrotic range proteinuria complicating a familial podocytopathy. Society of Obstetric Medicine of Australia and New Zealand Annual Scientific Meeting, 2017.
Oral	<b>Beech A, Caruthers K</b> . Lactation ketoacidosis: a case report and review of the literature. Society of Obstetric Medicine of Australia and New Zealand Annual Scientific Meeting, 2017.

TYPE (ORAL / POSTER / INVITED)	PRESENTATION INFORMATION (RBWH STAFF IN BOLD)
Oral Invited	<b>Beech A, Callaway L.</b> High risk case presentation: a pregnancy complicated by belimumab use and lupus nephritis. Society of Obstetric Medicine of Australia and New Zealand Annual Scientific Meeting, 2017.
Oral Invited	<b>Robinson H.</b> Carbohydrate restriction in gestational diabetes mellitus. Society of Obstetric medicine of Australia and New Zealand Annual Scientific Meeting, 2017
Oral	<b>Barrett HL,</b> Gomez-Arango LF, Jensen M, Murphy VE, McIntyre HD, <b>Callaway LK,</b> Dekker Nitert M. Faecal microbiome in women in early pregnancy is altered in the setting of asthma. Society of Obstetric medicine of Australia and New Zealand Annual Scientific Meeting, 2017
Oral	Naderpoor N, Mousa A, Gomez-Arango LF, <b>Barrett HL,</b> Dekker Nitert M, de Courten B. Faecal microbiome is related to anthropometric and metabolic parameters in an overweight or obese otherwise health cohort. Australian Diabetes Society Annual Scientific Meeting, Perth 2017
Oral	Naderpoor N, Mousa A, Gomez-Arango LF, <b>Barrett HL,</b> Dekker Nitert M, de Courten B. The effect of vitamin D supplementation on faecal microbiome in vitamin D deficient overweight or obese adults: a randomised clinical trial. Endocrine Society of Australia Annual Scientific Meeting Perth 2017
Oral	<b>Barrett HL,</b> Dekker Nitert M, <b>de Jersey S,</b> <b>Callaway LK,</b> <b>D'Emden M,</b> McIntyre HD. Maternal capillary triglycerides in late pregnancy. Australian Diabetes Society Annual Scientific Meeting, Perth 2017
Poster	Gomez-Arango, L. F, <b>Barrett, H. L,</b> Wilkinson, S, <b>Callaway, L. K,</b> McIntyre, H. D, Morrison, M, Dekker Nitert, M. A fibre-deprived diet influences Collinsella abundance in the overweight and obese pregnant microbiome and alters maternal metabolic risk. Falk Symposium 2017: Gut Microbiome and Mucosal or Systemic Dysfunction: Mechanisms, Clinical Manifestations and Interventions. Brisbane, Australia.
Poster	Dekker Nitert, M, Gomez-Arango, L. F, D.M. Frazer, <b>H. Barrett, L.K. Callaway,</b> G.J. Anderson. Iron supplementation does not alter the gut microbiome in early pregnancy. Falk Symposium 2017: Gut Microbiome and Mucosal or Systemic Dysfunction: Mechanisms, Clinical Manifestations and Interventions. Brisbane, Australia.
Poster	Kobayashi M, Gomez-Arango, L. F, Carey-Foster W, <b>Callaway, L. K,</b> Morrison, M, <b>Barrett, H. L,</b> Dekker Nitert, M. Antibiotic resistance genes in the gut microbiome of pregnant women. Falk Symposium 2017: Gut Microbiome and Mucosal or Systemic Dysfunction: Mechanisms, Clinical Manifestations and Interventions. Brisbane, Australia.
Poster	Dekker Nitert, M., Gomez-Arango, L.F., <b>Callaway, L.K,</b> McIntyre, H.D., Morrison, M, <b>Barrett, HL.</b> Women who develop hypertensive of pregnancy have altered composition of the gut microbiota at 16 weeks gestation. International Society for the Study of Hypertension European Congress, Berlin Germany 2017
Poster	<b>Angela North, Karen Whitfield, Karin Lust, Helen Barrett.</b> Therapeutic Heparin in the Obstetric Patient - RBWH Symposium 2017. Brisbane.
Poster	<b>Angela North, Karen Whitfield, Karin Lust, Helen Barrett.</b> Therapeutic Heparin in the Obstetric Patient - SOMANZ 2017. Canberra.



# 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 groundbreaking 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 2017 we received funding for the IMAGINE Study which aims to implement and evaluate a model of training for practising gynaecologists in Total Laparoscopic Hysterectomy. The IMAGINE study was initiated at two Queensland Health Hospitals in 2017. We have been continuing with Long Term Follow-Up of the Laparoscopic Approach to Carcinoma of the Endometrium (LACE) Trial in 2017. The LACE Trial evaluated the safety of laparoscopic hysterectomy and included 760 participants. We are now looking at long term quality of life, health and lifestyle following surgical treatment for endometrial cancer. We also continued recruiting for the ECHO Trial which examines the benefits of exercise during chemotherapy for ovarian cancer. This study is a collaboration between the Queensland University of Technology, NHMRC Clinical Trials Centre and QCGC Research. The feMMe trial, which allows a large number of women to have effective treatment of their endometrial cancer without the need for major surgery and its implications, continued recruitment in 2017.

## 2017 RESEARCH POSITIONS: COORDINATORS, FELLOW, ADJUNCT AND HONORARY POSITIONS

NAME	TYPE OF FELLOWSHIP	RESEARCH PROJECT	UNIVERSITY (YEARS)
Nigel Armfield	Research	Gynaecological Oncology	The University of Queensland 2011-

## 2017 CURRENT RBWH RESEARCH GROUP / DEPARTMENT LED RESEARCH ACTIVITY

RBWH RESEARCH GROUP / DEPARTMENT LEAD RESEARCHERS	COLLABORATIVE RESEARCHERS	RESEARCH PROJECT TITLE
Prof Andreas Obermair	Monika Janda (QUT)	A stepped wedge cluster trial to implement and evaluate a model of training for practising gynaecologists in Total Laparoscopic Hysterectomy

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

## 2017 COLLABORATIVE RESEARCH ACTIVITY INVOLVING RBWH RESEARCH GROUP / DEPARTMENT

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



## 2017 RESEARCH AWARDS AND ACHIEVEMENTS

RECIPIENT	AWARD	EVENT
Queensland Centre for Gynaecological Cancer Research	Clinical Research Award	Metro North Hospital and Health Service 2017 Research Excellence Awards

## 2017 RESEARCH GRANTS - AWARDED

INVESTIGATORS (RBWH STAFF IN BOLD)	RBWH RESEARCH GROUPS / DEPARTMENTS	PROJECT TITLE	GRANTING BODY	AMOUNT IN 2017	TOTAL AMOUNT (YEARS)
<b>Obermair A</b> , Jackson G, <b>Kurz S</b> , Armfield N, Janda M, Page K.	<b>QCGC Research</b>	Transforming surgical practice in hysterectomy	Metro North Hospital and Health Service SEED Innovation Fund	\$144,511	\$144,511 (2017)
<b>Obermair A</b> , Quinn M, Brennan D, Armes J, Janda M, GebSKI V, Carter J, Leung Y, Perrin L, Bunting M, Oehler M, <b>Nicklin J</b> , Strakosch C, Williams M	<b>QCGC Research</b>	A phase II randomised clinical trial of Mirena ± metformin ± weight loss intervention in patients with early stage cancer of the endometrium	Cancer Australia	\$170,000	\$540,000 (2015-2018)
<b>Obermair A</b> , Janda M, Forder P, <b>Nicklin J</b> , Perrin L, Manolitsas T, Leung Y, Hogg R, Farrell R, Oehler M, Sykes P, Williams M, GebSKI V.	<b>QCGC Research</b>	Long-term follow-up of the Laparoscopic Approach to Carcinoma of the Endometrium (LACE) Trial-survival outcomes.	Cancer Australia	\$254,891	\$380,674 (2016-2018)

## 2017 RESEARCH PUBLICATIONS

TYPE (JOURNAL ARTICLE / BOOK / BOOK CHAPTER / LETTER)	PUBLICATION INFORMATION (RBWH STAFF IN BOLD)
Journal article	Janda M, Armfield NR, Page K, Kerr G, <b>Kurz S</b> , Jackson G, Currie J, Weaver E, Yazdani A, <b>Obermair A</b> . Factors influencing women's decision making in hysterectomy. Patient Educ Couns. 2017 Sep 12.
Journal article	Hayes SC, Janda M, Ward LC, <b>Reul-Hirche H</b> , Steele ML, Carter J, Quinn M, Cornish B, <b>Obermair A</b> . Lymphedema following gynecological cancer: Results from a prospective, longitudinal cohort study on prevalence, incidence and risk factors. Gynecol Oncol. 2017 Sep;146(3):623-629.

TYPE (JOURNAL ARTICLE / BOOK / BOOK CHAPTER / LETTER)	PUBLICATION INFORMATION (RBWH STAFF IN BOLD)
Journal article	Janda M, GebSKI V, Davies LC, Forder P, Brand A, Hogg R, Jobling TW, <b>Land R</b> , Manolitsas T, Nascimento M, Neesham D, <b>Nicklin JL</b> , Oehler MK, Otton G, Perrin L, Salfinger S, Hammond I, Leung Y, Sykes P, Ngan H, <b>Garrett A</b> , Laney M, Ng TY, Tam K, Chan K, Wrede CD, Pather S, Simcock B, Farrell R, Robertson G, Walker G, Armfield NR, Graves N, McCartney AJ, <b>Obermair A</b> . Effect of Total Laparoscopic Hysterectomy vs Total Abdominal Hysterectomy on Disease-Free Survival Among Women With Stage I Endometrial Cancer: A Randomized Clinical Trial. JAMA. 2017 Mar 28;317(12):1224-1233.
Journal article	<b>Obermair A</b> , Simunovic M, Iserning L, Janda M. Nutrition interventions in patients with gynecological cancers requiring surgery. Gynecol Oncol. 2017 Apr;145(1):192-199.
Journal article	<b>Nicklin JL, McGrath S, Tripcony L, Garrett A, Land R, Tang A</b> , Perrin L, Chetty N, Jagasia N, Crandon AJ, Nascimento M, Walker G, <b>Sanday K, Obermair A</b> . The shift toward neo-adjuvant chemotherapy and interval debulking surgery for management of advanced ovarian and related cancers in a population-based setting: Impact on clinical outcomes. Aust N Z J Obstet Gynaecol. 2017 Dec;57(6):651-658.
Journal article	Playdon MC, Nagle CM, Ibiebele TI, Ferrucci LM, Protani MM, Carter J, Hyde SE, Neesham D, <b>Nicklin JL</b> , Mayne ST, Webb PM. Pre-diagnosis diet and survival after a diagnosis of ovarian cancer. Br J Cancer. 2017 Jun 6;116(12):1627-1637.
Journal article	Verhoef L, <b>Baartz D, Morrison S, Sanday K, Garrett AJ</b> . Outcomes of women diagnosed and treated for low-risk gestational trophoblastic neoplasia at the Queensland Trophoblast Centre (QTC). Aust N Z J Obstet Gynaecol. 2017 Aug;57(4):458-463.
Journal article	Phillips-Yelland J, Payton D, <b>Land R</b> , Kaur A. Incidental fallopian tube mesothelioma diagnosed at time of elective bilateral salpingectomy for sterilisation: A case report. Gynecol Oncol Rep. 2017 Aug 14;22:1-3.
Journal article	Cook PD, <b>Land RP</b> . Gastric decompression before laparoscopic entry via Palmer's point. Anaesth Intensive Care. 2017 Nov;45(6):759.
Journal article	Preyer O, Concin N, <b>Obermair A</b> , Concin H, Ulmer H, Oberaigner W. The relative risk of second primary cancers in Austria's western states: a retrospective cohort study. BMC Cancer. 2017 Oct 24;17(1):699.
Journal article	Smith D, Stewart CJR, Clarke EM, Lose F, Davies C, Armes J, <b>Obermair A</b> , Brennan D, Webb PM, Nagle CM, Spurdle AB. ER and PR expression and survival after endometrial cancer. Gynecol Oncol. 2017 Dec 4.
Journal article	Johnatty SE, Tan YY, Buchanan DD, Bowman M, Walters RJ, <b>Obermair A</b> , Quinn MA, Blomfield PB, Brand A, Leung Y, Oehler MK; ANECS Group, Kirk JA, O'Mara TA, Webb PM, Spurdle AB. Family history of cancer predicts endometrial cancer risk independently of Lynch Syndrome: Implications for genetic counselling. Gynecol Oncol. 2017 Nov;147(2):381-387.

## 2017 CONFERENCE PRESENTATIONS – INVITED SPEAKER, ORAL AND POSTER:

TYPE (ORAL / POSTER / INVITED)	PRESENTATION INFORMATION (RBWH STAFF IN BOLD)
Oral	Obermair A, Fleming S, Hayes S, Ward L, Kneul-Hirsch H, Janda M. The association of lymphedema trajectories with symptoms and symptom severity following gynaecological cancer treatment in Queensland: A prospective cohort study. 20th International Meeting of the European Society of Gynaecological Oncology 2017, Vienna, Austria.
Oral	Obermair A, Higgs P, Forder P, Asher R, Janda M, GebSKI V. The effect of hysterectomy on pelvic floor symptoms. 20th International Meeting of the European Society of Gynaecological Oncology 2017, Vienna, Austria.
Oral	Celentano V, Smart N, Hasegawa H, Cahill R, Obermair A, Cecil T, Lai P, Boni L, McGrath J, Gupta S, Spinelli A, Griffith J, Dunkin B, Acheson A, Coleman M. Development of a joint trainers and trainees' consensus statement for reporting of educational videos in laparoscopic surgery. 12th Scientific and Annual Meeting of the European Society of Coloproctology 2017. Berlin, Germany.

# GRANTLEY STABLE NEONATAL UNIT

The Grantley Stable Neonatal Unit (GSNU) has had an exciting year in research. Our nursery continues to actively participate and contribute to large multicentre trials investigating areas of neuroprotection, early predictors of neurodevelopment, cutting edge ventilation strategies and exploring how novel and innovative treatments impact on preterm infant morbidity and mortality.

2017 was the inaugural year for the GSNU Research group which is comprised of medical, nursing and allied health staff from within the unit. Its mission is to develop research ideas into clinically meaningful studies and to facilitate translation of that research into practice in order to further improve outcomes. The Quality Assurance Group was also formed this year and it aims to work closely with GSNU Research to prioritise research agendas.

Predicting neurodevelopmental outcomes, exploring the impact of nutrition in premature infant neurodevelopment and standardization of neonatal physiological parameters are some of the areas being investigated by a number of research higher degree colleagues. Most of our trainee fellows gain invaluable research experience whilst working closely with our clinical researchers endeavouring to answer some of the challenging neonatal questions we encounter on a daily basis.

Our research goals include further expansion of GSNU, Milk Bank and NeoRESQ (retrieval service) research programs through ongoing collaboration with the Perinatal Research Centre, UQ and Centre for Children's Health Research.

## SUPERVISED POST-GRADUATE RESEARCH STUDENTS

NAME (RBWH STAFF IN BOLD)	CURRENT STUDIES (E.G. PHD, MASTERS ETC.) UNIVERSITY (DURATION)	RESEARCH PROJECT TITLE	SUPERVISORS (RBWH STAFF IN BOLD)
Donna Franklin	PhD, University of Queensland	Nasal High flow therapy in infants with bronchiolitis.	John Fraser, <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</b> , <b>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, <b>Mark Davies</b>
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 Neoantes Cared for in Single-Room Environments on Developmental Outcomes up to 2 years	Karen New, Fiona Bogossian, Ian Hughes, <b>Mark Davies</b>
<b>Deb Gilmour</b>	FRACP, Royal Australasian College of Physicians	What sound/light/vibration/acceleration are babies experiencing on retrievals?	<b>Mark Davies</b>
<b>Jasmine Antoine</b>	FRACP, Royal Australasian College of Physicians	Bacterial colonisation of endotracheal tube (ETT) in infants less than 32 weeks gestation	<b>Mark Davies</b> , <b>Garry Inglis</b>
<b>Randa Koghali</b>	FRACP, Royal Australasian College of Physicians	RCT proposal: prophylactic antibiotics for umbilical lines	<b>Mark Davies</b>
<b>Janet Sharpe</b>	FRACP, Royal Australasian College of Physicians	Does earlier arrival of the retrieval team improve short-term outcomes in outborn extremely premature infants?	<b>Mark Davies</b>

NAME (RBWH STAFF IN BOLD)	CURRENT STUDIES (E.G. PHD, MASTERS ETC.) UNIVERSITY (DURATION)	RESEARCH PROJECT TITLE	SUPERVISORS (RBWH STAFF IN BOLD)
<b>Janet Sharpe</b>	FRACP, Royal Australasian College of Physicians	Does pasteurised donor human milk/probiotics affect mortality/sepsis/necrotising enterocolitis?	<b>Mark Davies</b>
<b>DidierTshkala</b>	FRACP, Royal Australasian College of Physicians	Does pasteurised donor human milk availability affect breastfeeding	<b>Mark Davies</b>
<b>Melissa Weber</b>	FRACP, Royal Australasian College of Physicians	An Audit of Noise levels in a Level Six Intensive care Neonatal Unit	<b>Melissa Lai, Mark Davies</b>
Nada AlTheyab	PhD	Body Composition in Very Preterm Infants During Their Hospital Stay	<b>AProf Tim Donovan,</b> Dr Barbara Lingwood, Dr Yvonne Eiby, Prof Paul Colditz
Alison D'Souza	MPhil	The impact of macronutrient intake and growth on neurodevelopmental outcome in preterm infants	<b>AProf Tim Donovan,</b> Dr Barbara Lingwood, Dr Yvonne Eiby, Prof Paul Colditz
Ms Nur Abu Kassim	PhD UQ (2015-2017)	To investigate vitamin D and vitamin D analogues levels in human plasma	<b>Dr Karen Whitfield,</b> Professor N Shaw. Dr A Hewavitharana
Ms Nor Hidayah Taufek	PhD UQ (2014-2017)	To investigate trace element concentration in human milk	<b>Dr Karen Whitfield,</b> Professor N Shaw. Dr A Hewavitharana

## 2017 RESEARCH POSITIONS: COORDINATORS, FELLOW, ADJUNCT AND HONORARY POSITIONS

NAME	TYPE OF FELLOWSHIP	RESEARCH PROJECT	UNIVERSITY (YEARS)
<b>Dr Karen Whitfield</b>	Adjunct Senior Researcher	School of Pharmacy	University of Queensland (2016 to date)

## 2017 CURRENT RBWH RESEARCH GROUP / DEPARTMENT LED RESEARCH ACTIVITY

RBWH RESEARCH GROUP / DEPARTMENT LEAD RESEARCHERS	COLLABORATIVE RESEARCHERS	RESEARCH PROJECT TITLE
<b>Deb Gilmour</b>	<b>Mark Davies</b>	What sound/light/vibration/acceleration are babies experiencing on retrievals?
<b>Jasmine Antoine</b>	<b>Mark Davies</b>	Bacterial colonisation of endotracheal tube (ETT) in infants less than 32 weeks gestation
<b>Randa Koghali</b>	<b>Mark Davies</b>	RCT proposal: prophylactic antibiotics for umbilical lines
<b>Janet Sharpe</b>	<b>Mark Davies</b>	Does earlier arrival of the retrieval team improve short-term outcomes in outborn extremely premature infants?
<b>Janet Sharpe</b>	<b>Mark Davies</b>	Does pasteurised donor human milk/probiotics affect mortality/sepsis/necrotising enterocolitis?

RBWH RESEARCH GROUP / DEPARTMENT LEAD RESEARCHERS	COLLABORATIVE RESEARCHERS	RESEARCH PROJECT TITLE
<b>DidierTshmla</b>	<b>Mark Davies</b>	Does pasteurised donor human milk availability affect breast feeding
<b>DidierTshmla</b>	<b>Adam Hoellering, Mark Davies</b>	Study of movement of umbilical venous catheters over time
<b>Michelle Paliwoda</b>	<b>Mark Davies, Karen new, Fiona Bogossian</b>	Standardisation of neonatal physiological parameters and development of neonatal early warning tools
<b>Melissa Weber</b>	<b>Melissa Lai, Mark Davies</b>	An Audit of Noise levels in a Level Six Intensive care Neonatal Unit
<b>AProf Tim Donovan</b>	Anndrea Flint , SCN, Redcliffe Hospital. <b>Donna Hovey</b> SCN, Grantley Stable Neonatal Unit, RBWH. Stephanie Webster SCN, Caboolture Hospital. Dr Helen Donovan , School of Nursing, QUT.	Special Care Nursery Feeding Study
<b>Pieter Koorts</b>	Dr Paul Dawson, Professor Nadia Badawi, Professor Roslyn Boyd, A/Professor Vicki Flenady, Dr Elizabeth Hurrion, Professor Francis Bowling, <b>Dr Pieter Koorts</b> , Professor Sailesh Kumar	Neuroprotective role of sulphate among preterm babies (SuPreme study)
<b>Pieter Koorts</b>	William Tarnow-Mordi, Kei Lui, Roger Soll, Paolo Manzoni, Deborah Schofield	LIFT (Lactoferrin Infant feeding trial)
<b>Pieter Koorts</b>	<b>Mark Davies, Katherine White, Garry Inglis, Adam Hoellering</b>	Propofol compared to Morphine and Midazolam for sedation for intubation in infants.

## 2017 COLLABORATIVE RESEARCH ACTIVITY INVOLVING RBWH RESEARCH GROUP / DEPARTMENT

COLLABORATIVE LEAD RESEARCHERS	RBWH RESEARCHERS	RESEARCH PROJECT TITLE
Luke Jardine	<b>Mark Davies, Paul Colditz</b>	Development of early predictors of long-term neurodevelopmental outcome in preterm infants
Prof Peter Dargaville	<b>AProf Tim Donovan, Dr Melissa Lai</b>	Multicentre Randomised Controlled Trial of Minimally-Invasive Surfactant Therapy in Preterm Infants 25-28 Weeks Gestation on Continuous Positive Airway Pressue (2017-current)
Paul Dawson	<b>Pieter Koorts, Paul Colditz</b>	Neuroprotective role of sulphate among preterm babies (SuPreme Study) HREC/14/MHS/188
William Tarnow-Mordi	<b>Pieter Koorts</b>	Does lactoferrin improve survival free from morbidity in very low birth weight infants? Lactoferrin Infant Feeding Trial: a randomised controlled trial. HREC/13/WCHN/165
Helen Liley	<b>Pieter Koorts, Paul Colditz</b>	Preventing Adverse Outcomes of Neonatal Hypoxic Ischaemic Encephalopathy with Erythropoietin: A Phase III Randomised Placebo Controlled Multicentre Australian Trial HREC/14/RPAH/251



COLLABORATIVE LEAD RESEARCHERS	RBWH RESEARCHERS	RESEARCH PROJECT TITLE
Katie Groom, Chris McKinlay, Glen Gardner	<b>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). HREC/17/QRBW/417
Katie Groom, Glen Gardner	<b>Renuka Sekar, Pieter Koorts</b>	Strider NZAus - Childhood Outcomes of Strider NZAus: A Randomised Controlled Trial of Sildenafil Therapy In Dismal Prognosis EarlyOnset HREC/17/QRBW/417
Rod Hunt	<b>Paul Colditz, Tim Donovan, Pieter Koorts, David Cartwright</b>	A randomized controlled trial comparing the treatment of electrographic and clinical seizures, to the treatment of clinical seizures alone, in term or near-term encephalopathic infants and measuring the impact on death and neurodevelopment at 2 years HREC/11/QRCH/135
William Tarnow-Mordi	<b>Pieter Koorts</b>	Should very preterm babies receive a placental transfusion at birth? A RCT Study A randomised controlled trial. HREC/11QRCH/12

## 2017 RESEARCH AWARDS AND ACHIEVEMENTS

RECIPIENT	AWARD	EVENT
Karen Whitfield	National Australian Clinical Pharmacy Award	43rd Society of Hospital Pharmacists Australia National Conference, Sydney 2017

## 2017 RESEARCH GRANTS - AWARDED

INVESTIGATORS (RBWH STAFF IN BOLD)	RBWH RESEARCH GROUPS / DEPARTMENTS	PROJECT TITLE	GRANTING BODY	AMOUNT IN 2017	TOTAL AMOUNT (YEARS)
<b>Donovan T,</b> Lingwood B, <b>Colditz P,</b> Dekker Nitert M.	Neonatology, UQ	RBWH Project Grant 2017: Long term consequences of altered neonatal adiposity.	RBWH Foundation	\$38,979	
<b>Dr Karen Whitfield,</b> <b>Dr I Coombes,</b> <b>Ms K Davies</b> <b>Dr Pieter Koorts</b>	Pharmacy	Neonatal Medication Safety across the Continuum of Care	Sanofi Pamela Nieman Continuum Of Care Grant – SHPA	\$10,000	

## 2017 RESEARCH PUBLICATIONS

TYPE (JOURNAL ARTICLE / BOOK / BOOK CHAPTER / LETTER)	PUBLICATION INFORMATION (RBWH STAFF IN BOLD)
Commentary	<b>Davies MW</b> (on behalf of Cochrane Clinical Answers Editors). What are the effects of antibiotics in neonates with meconium aspiration syndrome? Cochrane Clinical Answers [online] 2017. DOI: 10.1002/cca.1770.
Commentary	<b>Davies MW</b> (on behalf of Cochrane Clinical Answers Editors). For preterm infants given a diagnosis of bronchopulmonary dysplasia or at high risk of developing this disease, what are the benefits and harms of initiating treatment with inhaled corticosteroids after the first week of life? Cochrane Clinical Answers [online] 2017. DOI: 10.1002/cca.1884.
Commentary	<b>Davies MW</b> (on behalf of Cochrane Clinical Answers Editors). How does nasal intermittent positive-pressure ventilation (NIPPV) compare with nasal continuous positive airway pressure (NCPAP) in neonates after extubation? Cochrane Clinical Answers [online] 2017. DOI: 10.1002/cca.1703.
Commentary	<b>Davies MW</b> (on behalf of Cochrane Clinical Answers Editors). What are the benefits and harms of inositol for preterm infants with or at risk for respiratory distress syndrome? Cochrane Clinical Answers [online] 2017. DOI: 10.1002/cca.1550.
Journal Article	Ratnasingham A, Eiby Y, Dekker M, <b>Donovan T</b> , Lingwood B “Is rapid fat accumulation in early life associated with adverse later health outcomes?” Placenta Vol 54:p125-130 at <a href="http://dx.doi.org/10.1016/j.placenta.2017.01.101">http://dx.doi.org/10.1016/j.placenta.2017.01.101</a> 2017
Journal editorial	<b>Whitfield K</b> (2017) The Emerging Role of the Women’s and Newborns Pharmacist. JPPR Editorial (in press)
Journal article	Tarnow-Mordi W, Morris J, Kirby A, Robledo K, Askie L, Brown R, Evans N, Finlayson S, Fogarty M, GebSKI V, Ghadge A, Hague W, Isaacs D, Jeffery M, Keech A, Kluckow M, Popat H, Sebastian L, Aagaard K, Belfort M, Pammi M, Abdel-Latif M, Reynolds G, Ariff S, Sheikh L, Chen Y, <b>Colditz P</b> , Liley H, Pritchard M et al; Delayed versus Immediate Cord Clamping in Preterm Infants. The New England Journal of Medicine. 2017 Dec 21;377(25):2445-2455.

## 2017 CONFERENCE PRESENTATIONS – INVITED SPEAKER, ORAL AND POSTER:

TYPE (ORAL / POSTER / INVITED)	PRESENTATION INFORMATION (RBWH STAFF IN BOLD)
Invited	<b>Donovan T</b> , Al Theyab N, Lingwood B, Eiby P, <b>Colditz P</b> “Are we making premature neonates fat?” Infant Feeding Seminar, Aspen Nutrition Brisbane
Invited	<b>Donovan T</b> , Al Theyab N, Lingwood B, <b>Colditz P</b> “Growth and body composition in extremely preterm infants is altered early” International Conference on Developmental Origins of Adiposity and Long-term health: The Power of Programming. Munich
Oral	Johnston T, <b>Sekar R</b> , <b>Donovan T</b> , <b>Colditz P</b> , Moffitt T, Endo T, Petersen L, Nester I, Ellerington J “Has the prevalence of neural tube defects decreased in babies born to indigenous mothers in Qld?” RANZCOG Annual Scientific Meeting, Perth
Oral	Lingwood BE, Al-Theyab N, <b>Donovan T</b> , Eiby Y, <b>Colditz P</b> “When and why do very preterm infants accumulate fat”. 2nd European PEA POD User Meeting, Amsterdam. The Netherlands
Oral	Lingwood B, Al Theyab N, <b>Donovan T</b> , <b>Colditz P</b> “Early altered adiposity in preterm infants: When and why.” 4th International Conference on Nutrition and Growth, Amsterdam
Oral	Dr Adrian Chin, <b>Dr Renuka Sekar, A/Prof Tim Donovan</b> , Dr Amy Krepska, Dr Sheridan Bell, Dr Mitchell Lawrence, Dr Shaun McGrath, Dr Alex Robinson, Mr Lachlan Webb, Professor Andre van Zundert “Increased abdominal subcutaneous fat thickness measured by ultrasound at 18-22 weeks gestation is associated with adverse maternal pregnancy outcomes. SOMANZ/ADIPS National Conference, Canberra

TYPE (ORAL / POSTER / INVITED)	PRESENTATION INFORMATION (RBWH STAFF IN BOLD)
Poster	<b>Whitfield K. To develop and evaluate a structured training program for interns in the specialist field of women's and newborns pharmacy. Monash Pharmacy Education Symposium 2017, Prato, Italy, 9-12 July.</b>
Oral	Whitfield K, Barrett H, Fassbind I, Hossein-zadeh Z, Hoy S, Lust K Maternity outpatient department clinic – a new role for the women's and newborns pharmacist SHPA National Conference, November 2017 Sydney.

