

The background of the image is a composite. The top half shows a petri dish with a red agar surface, where several streaked bacterial colonies are visible. The bottom half shows a white surface with several chemical structures drawn in black ink. These structures include amino acids like glycine and glutamine, and a more complex molecule with a pyrrolidine ring and a sulfonamide group. The text 'INTERNAL MEDICINE SERVICES' is overlaid on the top half in white on a dark red background.

**INTERNAL MEDICINE**

**SERVICES**

## Internal Medicine Services



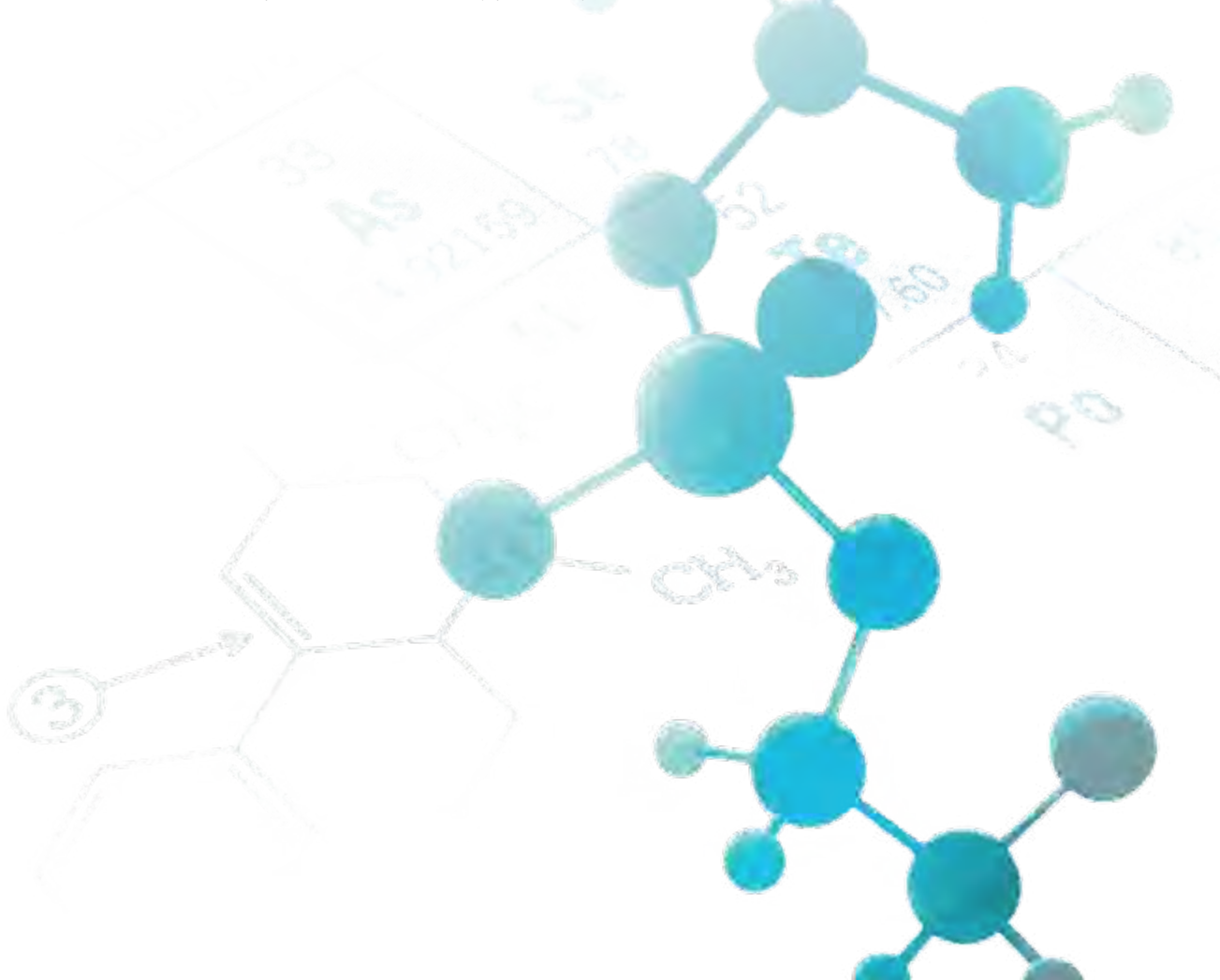
**Prof. Keshwar Baboolal**  
Executive Director  
Internal Medicine Services, RBWH

Internal Medicine Services has a deep history of involvement in advancing healthcare through research. This is achieved through the tireless efforts of dedicated staff across many disciplines and in all departments. In 2018, collaborations continued to be strong with our university and industry partners, as well as historical links with other health care providers and facilities both in Queensland and across Australia. IMS researchers also have many international collaborators that ensure that our contributions are benefiting not only our own patients, but also health care across the globe.

Having an active research culture not only adds to the body of knowledge of health care, however, also allows our patients to be involved in the latest therapies and diagnostics, have access to the newest medicines, and also to the best models of care under tight monitoring conditions.

IMS staff across all disciplines actively participate and share their research outcomes within the RBWH Symposium, national and international conferences, publications and health forums. The IMS Research teams have received many grants and awards to support their research endeavours through the, RBWH Foundation Research Awards, Special Grants and funding from sources such as NHMRC, among others.

Each department has highlighted their Research achievements, listed those staff involved, documented their publications and presentations and nominated Post Graduate Research Students. This exhaustive list, while extremely impressive, still does not highlight the hours and hours of work that goes into each and every piece of research that is undertaken within this campus. On behalf of the IMS Executive team I would like to express our acknowledgment and gratitude for all staff within Internal Medicine Services that contribute to the Research outcomes that benefit our patients. We are all very proud of your achievements.



# Department of Cardiology

## About this service:

The cardiology department has a broad investigator-driven research program with a focus on health service research/evaluation. Much of this research has grown from the efforts of clinicians to improve models of care with interdisciplinary collaboration.

## Highlights of 2018:

A **telehealth model of stress testing and Holter monitoring** has been developed through innovation funding to provide services to regional centres throughout Queensland, where the joint supervision and reporting of tests is provided by RBWH Cardiology staff through video link.

To promote ongoing education of doctors and cardiac scientists, **the inaugural Cardiac Imaging in Cardiomyopathies and Heart Failure meeting**, showcasing the expertise built up around the state-wide Cardiomyopathy clinic at the RBWH, was held at the Edwin Tooth Centre, and drew delegates from other states as well as New Zealand.

We have unique **cardiac obstetric** (collaboration with Internal Medicine and Obstetric Medicine) and **cardiac genetic** (collaboration with Genetic Health Queensland) **clinics** that receive state-wide referrals.

Other research interests include chest pain evaluation (collaboration with Emergency and Internal Medicine departments), using salivary biomarkers to detect presymptomatic heart disease (collaboration with QUT), and investigating the feasibility of training nurses to perform echocardiography to assess left ventricular function.

## Benefits for clinical practice:

**Tele-stress testing and Holter monitoring** has reduced waiting times, increased access and improved service quality for regional centres. **Accelerated Chest Pain Risk Evaluation (ACRE)** is being actively translated into clinical practice throughout Queensland. We have a **Cardiac Catheter Laboratory database** with comprehensive mandatory complication tracking, which informs the **Queensland Cardiac Outcomes Registry**. We informed the development of the **Heart Failure Reporting Outcomes (HERO) database**, which is tracking healthcare measures for all patients referred to heart failure services in Queensland.

## Editorial and other key positions held:

- Professor and Clinical Director, Australian Centre for Health Service Innovation, Queensland University of Technology
- Metro North Heart Lung Executive
- Associate Editor, Heart Lung Circulation (2 staff members)
- Editorial board for Cardiac Failure Review
- Editorial board for Medicine Today
- Editorial board for Cardiology Today
- Associate Cardiac Editor, Australasian Journal of Ultrasound in Medicine
- European Cardiac Obstetric Registry (only Australian representative)
- National Heart Foundation of Australia and Cardiac Society of Australia and New Zealand (CSANZ) Heart Failure Guidelines Working Group (Chair)
- Therapeutic Guidelines Cardiovascular Expert Group
- Australian Government Medical Services Advisory Committee (MSAC)
- National Heart Foundation Research Committee
- CSANZ Board
- CSANZ Education Trust Board of Trustees
- CSANZ Scientific Committee
- CSANZ Queensland Regional Secretary
- European Society of Cardiology Congress Abstract Review Committee
- Medicare Benefits Schedule Review Cardiac Services Clinical Committee
- Australian Government Department of Health Clinical Quality Registries Expert Advisory Group
- Australian Genomics Health Alliance- Cardiovascular Genetic Disorders Flagship
- Australian Cardiac Genetic Testing (AGCT) collaborative
- Australia and New Zealand Alliance for Cardiovascular Trials Scientific Advisory Committee
- Brisbane Diamantina Health Partners Evidence and Innovation in Clinical Care Theme Leadership Group
- Queensland Heart Failure Service Steering Committee (Co-chair)
- Queensland Cardiovascular Research Network Steering Committee.

## Supervised Post-Graduate Research Students

Name <i>(RBWH staff in bold)</i>	Current Studies <i>(e.g. PhD, Masters etc.)</i> University <i>(duration)</i>	Research Project Title	Supervisors <i>(RBWH staff in bold)</i>
<b>Roberts, Tiffany</b>	MPhil	Rural Hospital Chart Audit on Cardiac Investigations	<b>Adam Scott, Robert Mullins</b>
<b>Martin, Curtis</b>	Honours	Remote Control Exercise Stress Testing	<b>Adam Scott</b>
<b>Poulter, Rohan</b>	PhD, UQ (from 2012) (part-time, deferred)	Evaluating the diagnostic performance of dual energy cardiac computed tomography	<b>John Atherton, John Younger</b>
<b>Lo, Ada</b>	PhD, UQ (from 2014) <i>(part-time)</i>	Identification of new echocardiographic parameters in distinguishing between familial cardiomyopathy genotypic positive patients with and without phenotypic expression	<b>John Atherton, Arnold Ng, William Wang, Kristyan Guppy-Coles, Sandhir Prasad</b>
<b>Lancini, Daniel</b>	PhD, UQ (from 2015) <i>(part-time)</i>	Atrial fibrillation in the hospital setting	<b>Paul Martin, Sandhir Prasad, John Atherton, Louise Cullen, Robert Boots</b>
<b>Prasad, Sandhir</b>	PhD, UQ (from 2017) <i>(part-time)</i>	Left ventricular diastolic dysfunction following myocardial infarction: prevalence, predictors and prognosis	<b>John Atherton, John Younger, Kristyan Guppy-Coles</b>
<b>Conradie, Andre</b>	MPhil, UQ (from 2016) <i>(part-time)</i>	Determining an absolute risk model (calculator) to optimise the use of DAPT in patients presenting with acute coronary artery syndromes. use of DAPT in patients presenting with acute coronary artery syndromes	<b>John Atherton, Stephen Worthley, D Eccleston</b>
<b>Wicramasingha Arachchilage, Nuwan</b>	Master App Sci (Res), QUT <i>(from 2017)</i>	The clinical utility of salivary galectin-3 in heart failure	<b>Chamindie Punyadeera, Nathan Subramaniam, John Atherton</b>
<b>McCreanor, Victoria</b>	PhD, QUT	Identifying high value care for stable coronary artery disease in Australia. Prof Nick Graves	<b>N Graves, A Barnett, William Parsonage</b>
<b>Foran, Laura</b>	MPhil, QUT	Clinical presentation characteristics of Aboriginal and Torres Strait Islander patients presenting to an Emergency Department with suspected Acute Coronary Syndrome	<b>R Mahoney, William Parsonage, M Gatton, L Cullen</b>

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

Name	Type of Fellowship	Research Program	University <i>(years)</i>
<b>William Parsonage</b>	Professor and Clinical Director	Australian Centre for Health Service Innovation	QUT (2016-)
<b>Adam Scott</b>	Adjunct Professor	Faculty of Health	QUT (2009–2021)
<b>John Atherton</b>	Professor of Cardiology and Heart Failure Management	Faculty of Science, Health, Education and Engineering	University of Sunshine Coast (2017-2020)
<b>John Atherton</b>	Adjunct Professor	Faculty of Health	QUT (2018-2020)
<b>John Atherton</b>	Honorary Fellow	Department of Medicine, Royal Melbourne Hospital, Faculty of Medicine, Dentistry and Health Sciences	The University of Melbourne (2017-2021)
<b>Arun Dahiya</b>	<b>Adjunct Associate Professor</b>	<b>Faculty of Health</b>	Griffith University (2015-current)

## 2018 Current RBWH Research Group / Department Led Research Activity

RBWH Research Group / Department Lead Researchers	Collaborative Researchers	Research Project Title
<b>Adam Scott</b>	<b>Adam Scott, Alice McDonald, Tiffany Roberts, John Atherton, Paul Scuffham</b>	Tele-Cardiac Investigations to support rural/regional hospitals
<b>Kristyan Guppy-Coles, John Atherton, Sandhir Prasad</b>	<b>Arun Dahiya, Arnold Ng, Kym Smith, Ada Lo, Sam Hillier</b>	Novel 3D echocardiography techniques of left ventricular functional assessment: utilisation in routine clinical practice and screening
<b>Ada Lo, John Atherton, Kristyan Guppy-Coles</b>	<b>Arnold Ng, William Wang, Sandhir Prasad</b>	Identification of new echocardiographic parameters in distinguishing between familial cardiomyopathy genotypic positive patients with and without phenotypic expression
<b>Sandhir Prasad, John Atherton, John Younger, Kristyan Guppy-Coles</b>	<b>Liza Thomas, Tony Stanton, James Anderson, Ada Lo, Joanne Sippel, Christopher Kwan, Kym Smith</b>	Left ventricular diastolic dysfunction following myocardial infarction: prevalence, predictors and prognosis



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

RBWH Research Group/ Department Lead Researchers	Collaborative Researchers	Research Project Title
<b>Sandhir Prasad, John Atherton, Kristyan Guppy-Coles, Po-Ling Inglis, Joanne Sippel</b>	<b>Kym Smith, Ada Lo, Arun Dahiya</b>	Evaluation of oncology staff performing 3D-echocardiographic left ventricular function assessment for monitoring chemotherapy-induced cardiotoxicity
<b>Kristyan Guppy-Coles, Sandhir Prasad, John Atherton, Ada Lo</b>	<b>Kym Smith, Patrick Beard, James Armstrong, Terena Truloff</b>	Feasibility and accuracy of assessing left ventricular systolic function by measuring mitral annular excursion using a hand-held echocardiography device with an automated atrioventricular-plane tracking algorithm
Sanjoy Paul, Olga Montvida, <b>John Atherton</b>	Kerenaftali Klein, Julius Agbeve	Evaluation of the association of old and new anti-diabetes drugs with the risk of heart failure in patients with type 2 diabetes
<b>Cullen L, Parsonage W, McCormack L, Grenslade J</b>	Cullen L, <b>Parsonage W, McCormack L</b> , Milburn T, Starmer G, Stone R, Starmer K, <b>Greenslade J</b>	The impact of ImpACT: a protocol to improve emergency chest pain assessment
<b>Daniel Lancini, Paul Martin, Sandhir Prasad</b>	<b>Rob Boots</b>	New onset atrial fibrillation in the critically ill
<b>Daniel Lancini, Paul Martin, Sandhir Prasad</b>	<b>Louise Cullen, Jaimi Greenslade</b>	Atrial fibrillation in the emergency chest pain presentation
<b>Arun Dahiya</b> , Rick Jackson (Logan Hospital)	<b>Arun Dahiya</b>	Advanced Cardiovascular Imaging in Patients with Myotonic Dystrophy

## 2018 Collaborative Research Activity involving RBWH Research Group / Department

Collaborative Lead Researchers	RBWH Researchers	Research Project Title
<b>Alison Mudge, Charles Denaro, Adam Scott</b> , Julie Adsett, Robert Mullins, G Javorsky, <b>John Atherton</b> , Paul Scuffham, Thomas Marwick, Peter O'Rourke (Department of Internal Medicine and Aged care)	<b>Adam Scott, John Atherton</b>	A supervised exercise programme following hospitalisation for heart failure: does it add to disease management?
Jo Wu, <b>John Atherton</b> , Anne Chang, Mary Courtney, Esben Strodl, Steven McPhail (QUT)	<b>John Atherton</b>	Improving delivery by Ehealth-Assurance for Life (IDEAL)
Chamindie Punyadeera, <b>John Atherton</b> , Benjamin Schulz, Goce Dimeski, Karam Kostner (QUT)	<b>John Atherton</b>	Novel diagnostics for heart failure
Robyn Clark, Alexandra McCarthy, <b>John Atherton</b> , Bogda Koczwara, Narelle Berry, Tania Marin, Kerri Gillespie, Jonathon Foote, Sina Vatandoust (Flinders University)	<b>John Atherton</b>	Development of a cardiotoxicity cardiovascular risk assessment tool
Sanjoy Paul, Olga Montvida, <b>John Atherton</b> , Kerenaftali Klein, Julius Agbeve (QIMR)	<b>John Atherton</b>	Evaluation of the association of old and new anti-diabetes drugs with the risk of heart failure in patients with type 2 diabetes
Joseph Selvanayagam, Sanjay Prasad, Andrew McGavigan, Graham Hillis, Werner Jung, Laurent Billot, Suchi Grover, <b>John Atherton (SAHMRI)</b>	<b>John Atherton, John Younger, Paul Martin</b>	Cardiovascular Magnetic Resonance GUIDEd management of mild-moderate left ventricular systolic Heart Failure (CMR GUIDE HF)
Briffa T, <b>Cullen L</b> , Chew D, Knuiman M, Fatovich D, Hickman P, <b>Parsonage W</b> , Nedkoff L, Sanfilippo F, Hillis G, Mitra B, Wilkes G, Schneider H, Rankin J, Karmon J, Scanlan S, Stapleton S, Mather V	<b>William Parsonage, Louise Cullen</b>	Is highly-sensitive troponin testing advancing clinical practice, improving outcomes and cost-effective in the investigation and management of chest pain in the Emergency Department?
Elizabeth Sullivan, Rachael Cordina Dominica Zentner, Michael Peek Rachael Cordina, Lisa Simmons Lawrence Lam, David Celermajer, Wendy Pollock, <b>Karin Lust</b> , Jon Hyett, <b>William Parsonage</b> , Zhuoyang Li	<b>William Parsonage</b>	Australasian Maternity Outcomes Surveillance System (AMOSS) longitudinal study of first-time NSW/ACT mothers with heart disease and their babies
Tom Marwick, Liza Thomas, Andrew Taylor, Andrew Spencer, Andre La Gerche, Con Tam, Sherene Loi, Peter Mollee, <b>John Atherton</b> , Paul Harnett (Baker ID)	<b>John Atherton, Sandhir Prasad, Joanne Sippel, Arun Dahiya, Louise McCormack, John Younger</b>	Benefit of 2D-strain surveillance in improving cardiovascular outcomes in cancer patients undergoing cardiotoxic chemotherapy
Sanjeeva Kularatna, Nicholas Graves, <b>William Parsonage</b> (AusHSI/QUT)	<b>William Parsonage</b>	Feasibility of using Smartphone app to collect patient reported outcome measurement on patients with cardiovascular disease
Sanjeeva Kularatna, Paul Scuffham, <b>William Parsonage</b> , Joshua Byrnes, Gang Chen, <b>John Atherton</b> (AusHSI, QUT, Griffith)	<b>William Parsonage, John Atherton</b>	Development of cardiovascular disease specific multi attribute utility instrument to assist utility measurement in cardiovascular conditions; a case for economic evaluations

## 2018 Research Awards and Achievements

Recipient	Award	Event
Sandhir Prasad	Australasian Sonologist of the Year 2018	Australasian Society of Ultrasound in Medicine
Stephen Tomlinson (Supervisor Sandhir Prasad)	Queensland Case of the Year Competition Winner	Cardiac Society of Australia and New Zealand Queensland Regional Branch
Tele-Cardiac Investigations, (Adam Scott, Alice McDonald, Tiffany Roberts, Justin O'Connor)	Winner – Metro North Staff Excellence Award	Metro North Staff Excellence Awards

## 2018 Research Grants – Awarded

Investigators (RBWH staff in bold)	RBWH Research Groups/ Departments	Project Title	Granting Body	Amount in 2018	Total Amount (years)
Briffa T, <b>Cullen L</b> , Chew D, Knuiman M, Fatovich D, Hickman P, <b>Parsonage W</b> , Nedkoff L, Sanfilippo F, Hillis G, Mitra B, Wilkes G, Schneider H, Rankin J, Karnon J, Scanlan S, Stapleton S, Mather V	Cardiology and Emergency Medicine	Is highly-sensitive troponin testing advancing clinical practice, improving outcomes and cost-effective in the investigation and management of chest pain in the Emergency Department?	National Health and Medical Research Council (Project Grant APP1122792)	\$299,250	\$1,197,000.00 (2017- 2020)
T Marwick, L Thomas, A Taylor, A Spencer, A La Gerche, C Tam, S Loi, P Mollee, <b>J Atherton</b> , P Harnett	Cardiology and Oncology	Benefit of 2D-strain surveillance in improving cardiovascular outcomes in cancer patients undergoing cardiotoxic chemotherapy	National Health and Medical Research Council (Project Grant APP 1119955)	\$478,395.80	\$2,391,979.00 (2017-2021)
<b>Adam Scott</b> , <b>John Atherton</b>	Tele-Cardiac Investigations/ Cardiology RBWH	Statewide Tele-Cardiac Investigations	Health Improvement Unit, Metro North HHS, Qld Health	\$543,000.00	\$1,629,000.00 (2017-2019)

## 2018 Research Publications

### Journal articles:

- Montvida O, Green J, **Atherton J**, Paul S. Treatment with incretins does not increase the risk of pancreatic diseases compared to older anti-hyperglycaemic drugs, when added to metformin: real world evidence in people with type 2 diabetes. *Diabet Med* 2018 Oct 10. doi: 10.1111/dme.13835
- Tomlinson S**, **Atherton J**, **Prasad S**. Primary Carnitine Deficiency: a rare, reversible metabolic cardiomyopathy. *Case Rep Cardiol* 2018 Sep 13; 2018:3232105. doi: 10.1155/2018/3232105
- Atherton JJ**, Sindone A, De Pasquale CG, Driscoll A, MacDonald PS, Hopper I, Kistler, P, Briffa TG, Wong J, Abhayaratna WP, Thomas L, Audehm R, Newton PJ, O'Loughlin J, Connell C, Branagan M. National Heart Foundation of Australia and Cardiac Society of Australia and New Zealand: Australian clinical guidelines for the management of heart failure 2018. *Med J Aust* 2018;209:363-9
- Atherton JJ**, Sindone A, De Pasquale CG, Driscoll A, MacDonald PS, Hopper I, Kistler, P, Briffa TG, Wong J, Abhayaratna WP, Thomas L, Audehm R, Newton PJ, O'Loughlin J, Branagan M, Connell C. National Heart Foundation of Australia and Cardiac Society of Australia and New Zealand Guidelines for the prevention, detection and management of heart failure in Australia 2018. *Heart Lung Circ* 2018;27:1123-1208. doi: 10.1016/j.hlc.2018.06.214
- Prasad SB**, Holland DJ, **Atherton JJ**. Diastolic stress echocardiography: from basic principles to clinical applications. *Heart* 2018; 104:1739-48
- Ramsay SC**, **Lindsay K**, **Fong W**, **Patford S**, **Younger J**, Atherton J. Tc-HDP quantitative SPECT/CT in transthyretin cardiac amyloid and the development of a reference interval for myocardial uptake in the non-affected population. *Eur J Hybrid Imaging* 2018;2(1):17. doi: 10.1186/s41824-018-0035-1
- Prasad S**, Lin AK, **Guppy-Coles K**, Stanton T, Krishnasamy R, Whalley, G, Thomas L, **Atherton JJ**. Diastolic dysfunction assessed by contemporary guidelines and prognosis following myocardial infarction. *J Am Soc Echocardiogr* 2018; 31:1127-36
- Khan E, Brieger D, Amerena J, **Atherton J**, Chew D, Farshid A, Ilton M, Juergens C, Kangaharan N, Rajaratnam R, Sweeny A, Walters D, Chow C. Gender differences in management and outcomes of patients presenting with ST-elevation myocardial infarction: a prospective registry from Australia. *Med J Aust* 2018; 209:118-23
- Tomlinson S**, **Atherton JJ**. Heart failure: the crucial role of the GP. *Medicine Today* 2018; 19:19-26
- Bing R, Goodman S, Yan A, Fox K, Gale CP, Hyun K, D'Souza M, Shetty P, **Atherton J**, **Hammett C**, Chew D, Brieger D. Clinical risk stratification in non-ST elevation acute coronary syndromes - an analysis from the CONCORDANCE registry. *Eur Heart J Qual Care Clin Outcomes* 2018 Oct 1;4(4):309-17. doi: 10.1093/ehjqcco/qcy002
- Mudge AM**, **Denaro CP**, **Scott AC**, Meyers D, **Adsett JA**, Mullins RW, Suna JM, Atherton JJ, Marwick TH, Scuffham P, O'Rourke P. Addition of supervised exercise training to a post-hospital disease management program for patients recently hospitalized with acute heart failure: the EJECTION-HF randomized phase 4 trial. *JACC: Heart Failure* 2018; 6:143-152. doi.org/10.1016/j.jchf.2017.11.016

## Journal Articles: (cont):

12. Chan J, **Chao C**, **Younger J**, **Lo A**, **Dahiya A**, **Atherton JJ**, Jalali H, **Prasad S**. Eustachian valve endocarditis: case report and literature review. *Australasian Journal of Ultrasound in Medicine* 2018; 21:29-35. doi: 10.1002/ajum.12078
13. Donald KM, Troughton R, Dahlstrom U, Dargie H, Krum H, van der Meer P, McDonagh T, **Atherton J**, San George R, Kupfer K, Richards M, Doughty R. Daily home B-type natriuretic peptide monitoring in heart failure for prediction of impending clinical deterioration: results from the HOME HF study. *Eur J Heart Fail* 2018; 20:474–80. doi:10.1002/ehf.1053
14. Montvida O, Shaw J, **Atherton JJ**, Stringer F, Paul SK. Long-term trends in antidiabetic drug usage in the US: Real-world evidence in patients newly diagnosed with type 2 diabetes. *Diabetes Care* 2018; 41:69-78
15. Richardson E, Spinks C, Davis A, Turner C, **Atherton J**, **McGaughran J**, Semsarian C, Ingles J. Psychosocial implications of living with catecholaminergic polymorphic ventricular tachycardia in adulthood. *J Genet Couns* 2018; 27:549-57. DOI 10.1007/s10897-017-0152-1
16. Franzon J, Berry N, Ullah S, Versace V, McCarthy A, **Atherton J**, Roder D, Kocswara B, Coghlan D, Clark R. Heart failure following blood cancer therapy in pediatric and adult populations. *Asia Pac J Clin Oncol* 2018; 14:224-30. DOI: 10.1111/ajco.12782
17. McCreanor V, Graves N, Barnett AG, **Parsonage W**, Merlo G. A systematic review and critical analysis of cost-effectiveness studies for coronary artery disease treatment. Version 2. F1000Res. 2018 Jan 17
18. Than MP, Aldous SJ, Troughton RW, Pemberton CJ, Richards AM, Frampton CMA, Florkowski CM, George PM, Bailey S, Young JM, Cullen L, Greenslade JH, **Parsonage WA**, Everett BM, Peacock WF, Jaffe AS, Pickering JW. Detectable High-Sensitivity Cardiac Troponin within the Population Reference Interval Conveys High 5-Year Cardiovascular Risk: An Observational Study. *Clin Chem*. 2018 Jul;64(7):1044-1053
19. van der Linden N, Wildi K, Twerenbold R, Pickering JW, Than M, Cullen L, Greenslade J, **Parsonage W**, Nestelberger T, Boeddinghaus J, Badertscher P, Rubini, Giménez M, Klinkenberg LJ, Bekers O, Schöni A, Keller DI, Sabti Z, Puelacher C, Cupa J, Schumacher L, Kozuharov N, Grimm K, Shrestha S, Flores D, Freese M, Stelzig C, Strebel I, Miró Ò, Rentsch K, Morawiec B, Kawecki D, Kloos W, Lohrmann J, Richards AM, Troughton R, Pemberton C, Osswald S, van Dieijen-Visser MP, Mingels AM, Reichlin T, Meex SJR, Mueller C. Combining High-Sensitivity Cardiac Troponin I and Cardiac Troponin T in the Early Diagnosis of Acute Myocardial Infarction. *Circulation*. 2018 Sep 4;138(10):989-999
20. Greenslade J, Cho E, Van Hise C, Hawkins T, **Parsonage W**, Ungerer J, Tate J, Pretorius C, Than M, Cullen L. Evaluating Rapid Rule-out of Acute Myocardial Infarction Using a High-Sensitivity Cardiac Troponin I Assay at Presentation. *Clin Chem*. 2018 May;64(5):820-829
21. Greenslade JH, Carlton EW, Van Hise C, Cho E, Hawkins T, **Parsonage WA**, Tate J, Ungerer J, Cullen L. Diagnostic Accuracy of a New High-Sensitivity Troponin I Assay and Five Accelerated Diagnostic Pathways for Ruling Out Acute Myocardial Infarction and Acute Coronary Syndrome. *Ann Emerg Med*. 2018 Apr;71(4):439-451
22. Greenslade JH, Chung K, **Parsonage WA**, Hawkins T, Than M, Pickering JW, Cullen L. Modification of the Thrombolysis in Myocardial Infarction risk score for patients presenting with chest pain to the emergency department. *Emerg Med Australas*. 2018 Feb;30(1):47-54
23. Than MP, Pickering JW, Dryden JM, Lord SJ, Aitken SA, Aldous SJ, Allan KE, Ardagh MW, Bonning JWN, Callender R, Chapman LRE, Christiansen JP, Cromhout APJ, Cullen L, Deely JM, Devlin GP, Ferrier KA, Florkowski CM, Frampton CMA, George PM, Hamilton GJ, Jaffe AS, Kerr AJ, Larkin GL, Makower RM, Matthews TJE, **Parsonage WA**, Peacock WF, Peckler BF, van Pelt NC, Poynton L, Richards AM, Scott AG, Simmonds MB, Smyth D, Thomas OP, To ACY, Du Toit SA, Troughton RW, Yates KM; ICare-ACS Implementation Group. ICare-ACS (Improving Care Processes for Patients With Suspected Acute Coronary Syndrome): A Study of Cross-System Implementation of a National Clinical Pathway. *Circulation*. 2018 Jan 23;137(4):354-363
24. Pickering JW, Flaws D, Smith SW, Greenslade J, Cullen L, **Parsonage W**, Carlton E, Mark Richards A, Troughton R, Pemberton C, George PM, Than MP. A Risk Assessment Score and Initial High-sensitivity Troponin Combine to Identify Low Risk of Acute Myocardial Infarction in the Emergency Department. *Acad Emerg Med*. 2018 Apr;25(4):434-443
25. Chapman AR, Lee KK, McAllister DA, Cullen L, Greenslade JH, **Parsonage W**, Worster A, Kavsak PA, Blankenberg S, Neumann J, Sørensen NA, Westermann D, Buijs MM, Verdel GJE, Pickering JW, Than MP, Twerenbold R, Badertscher P, Sabti Z, Mueller C, Anand A, Adamson P, Strachan FE, Ferry A, Sandeman D, Gray A, Body R, Keevil B, Carlton E, Greaves K, Korley FK, Metkus TS, Sandoval Y, Apple FS, Newby DE, Shah ASV, Mills NL. Association of High-Sensitivity Cardiac Troponin I Concentration with Cardiac Outcomes in Patients with Suspected Acute Coronary Syndrome. *JAMA*. 2017 Nov 21;318(19):1913-1924
26. Van Hise CB, Greenslade JH, **Parsonage W**, Than M, Young J, Cullen L. External validation of heart-type fatty acid binding protein, high-sensitivity cardiac troponin, and electrocardiography as rule-out for acute myocardial infarction. *Clin Biochem*. 2018 Feb; 52:161-163
27. Carlton EW, Pickering JW, Greenslade J, Cullen L, Than M, Kendall J, Body R, **Parsonage WA**, Khattab A, Greaves K. Assessment of the 2016 National Institute for Health and Care Excellence high-sensitivity troponin rule-out strategy. *Heart*. 2018 Apr;104(8):665-672
28. Greenslade JH, Adikari T, Mueller C, Sandoval Y, Nestelberger T, **Parsonage W**, Hawkins T, Cullen L. Characteristics and occurrence of type 2 myocardial infarction in emergency department patients: a prospective study. *Emerg Med J*. 2018 Mar;35(3):169-175
29. Fabris E, van't Hof A, Hamm CW, Lapostolle F, Lassen JF, Goodman SG, ten Berg JM, Bolognese L, Cequier A, Chettibi M, **Hammett CJ**, Huber K, Janzon M, Merkely B, Storey RF, Zeymer U, Cantor WJ, Kerneis M, Diallo A, Vicaut E, Montalescot G. Pre-Hospital administration of Ticagrelor in diabetic patients with ST-elevation myocardial infarction undergoing primary angioplasty: a sub-analysis of the ATLANTIC trial. *Catheterization and Cardiovascular Interventions* 2018; 1–9. <https://doi.org/10.1002/ccd.27921>
30. Lapostolle F, van't Hof AW, Hamm CW, Stibbe O, Ecollan P, Collet JP, Silvain J, Lassen JF, Heutz W, Bolognese L, Cantor WJ, Cequier A, Chettibi M, Goodman SG, **Hammett CJ**, Huber K, Janzon M, Merkely B, Storey RF, Berg J, Zeymer U, Licour M, Tsatsaris A, Montalescot G. Morphine and ticagrelor interaction in primary percutaneous coronary intervention in ST-segment elevation myocardial infarction: ATLANTIC-Morphine. *American Journal of Cardiovascular Drugs* 2018; <https://doi.org/10.1007/s40256-018-0305-0>
31. **Hammett CJ**, Amerena J, Brieger D, Sindone A, Thompson PL, Worthley MI, Aylward PE. Preventing recurrent events in survivors of acute coronary syndromes in Australia: consensus recommendations using the Delphi process. *Current Medical Research and Opinion* 2018; 34(3): 551-8
32. Bagai A, Goodman SG, Cantor W, Vicaut E, Bolognese L, Cequier A, Chettibi M, **Hammett CJ**, Huber K, Janzon M, Lapostolle F, Lassen JF, Merkely B, Storey RF, ten Berg J, Zeymer U, Diallo A, Hamm C, Tsatsaris A, El Khoury J, van't Hof A, Montalescot G. Duration of Ischemia and Treatment Effects of Pre- Versus In-Hospital Ticagrelor in Patients with ST-Segment Elevation Myocardial Infarction: Insights from the ATLANTIC study. *Am Heart J* 2018; 196: 56-64

### Journal Articles: (cont):

33. Connolly SJ, Eikelboom JW, Bosch J, Dagenais G, Dyal L, Lanan F, Metsaranne K, O'Donnell M, Dans AL, Ha JW, Parkhomenko AN, Avezum AA, Lonn E, Lisheng L, Torp-Pedersen C, Widimsky P, Maggioni AP, Felix C, Keltai K, Hori M, Yusuf S, COMPASS investigators\*. Rivaroxaban with or without aspirin in patients with stable coronary artery disease: an international, randomised, double-blind, placebo-controlled trial. *Lancet*. 2018 Jan 20;391(10117):205-218. doi: 10.1016/S0140-6736(17)32458-3 \* Site PI: **Chris Hammett**.

### Book Publications:

1. Cardiovascular Expert Group (Moulds R, Allardice J, **Atherton J**, Campbell T, Connell C, Curnow J, Dooley S, Gibbs H, Hazell W, Hopper I, Kritharides L, Liew D, Molga A, Nelson M, O'Connor J, Roberts-Thomson K, Scherer D, Strathmore N, Thomas J). Therapeutic guidelines: cardiovascular. Version 7. Melbourne: Therapeutic Guidelines Limited; 2018.

## 2018 Conference Presentations – Invited Speaker, Oral and Poster

### Invited Speaker (J Atherton):

1. South Australian Health and Medical Research Institute (SAHMRI) Cardiovascular and Diabetes Event, SAHMRI, Adelaide, November 2018. Topic: heart failure workshop
2. Cardiac Imaging in Cardiomyopathies and Heart Failure, Royal Brisbane and Women's Hospital Edwin M Tooth Auditorium, November 2018 (Australasian Society for Ultrasound in Medicine (ASUM) Course: 6.75 myASUM CPD/ CME points). Topic: Imaging in HFrEF: what do the guidelines say?
3. Heart Foundation Webcast, Redbank Conferencing, Sydney, November 2018. Topic: National Heart Foundation of Australia and Cardiac Society of Australia and New Zealand (NHFA/CSANZ): guidelines for the prevention, detection and management of heart failure in Australia 2018
4. ThinkGP Webinar, Reed Medical Education, November 2018. Topic: Australian 2018 Heart Failure Guidelines. What's new and how to incorporate into clinical practice
5. Heart Failure Congress 2018, Melbourne, October 2018. Topic: Australian 2018 heart failure guidelines
6. Heart Failure Congress 2018, Melbourne, October 2018. Topic: genetics in heart failure
7. Iron Academy (Vifor), Melbourne, October 2018. Topic: evidence-based guidelines for the use of IV iron in heart failure
8. European Society of Cardiology Congress Roundup, Sydney, September 2018. Topic: 2018 Cardiology Congress Roundup: heart failure
9. South Australian Health and Medical Research Institute (SAHMRI) Clinical Trial Forum, Munich, Germany, September 2018. Topic: heart failure at the ESC 2018
10. European Society of Cardiology (ESC) Congress 2018, Munich, Germany, August 2018. Late breaking science in heart failure-discussant
11. 66<sup>th</sup> Annual Scientific Meeting of the Cardiac Society of Australia and New Zealand, Brisbane Convention and Exhibition Centre, Brisbane, August 2018. Topic: Heart Failure Reporting of Outcomes (HERO) Registry
12. 66<sup>th</sup> Annual Scientific Meeting of the Cardiac Society of Australia and New Zealand, Brisbane Convention and Exhibition Centre, Brisbane, August 2018. Topic: National Heart Foundation of Australia and Cardiac Society of Australia and New Zealand (NHFA/CSANZ): Guidelines for the prevention, detection and management of heart failure in Australia 2018
13. 66<sup>th</sup> Annual Scientific Meeting of the Cardiac Society of Australia and New Zealand, Brisbane Convention and Exhibition Centre, Brisbane, August 2018. Topic: Genetic testing for the general cardiologist
14. 66<sup>th</sup> Annual Scientific Meeting of the Cardiac Society of Australia and New Zealand Heart Failure Council, Brisbane Convention and Exhibition Centre, Brisbane, August 2018. Topic: National Heart Foundation of Australia and Cardiac Society of Australia and New Zealand (NHFA/CSANZ): Guidelines for the prevention, detection and management of heart failure in Australia 2018 – Introduction and Devices; Surgery and percutaneous procedures
15. Australian Cardiovascular Health and Rehabilitation Association (ACRA) Annual Scientific Meeting, Hotel Grand Chancellor, Brisbane, August 2018. Topic: management of renal impairment in the heart failure patient. The cardiologist perspective
16. Australian Cardiovascular Health and Rehabilitation Association (ACRA) Annual Scientific Meeting, Hotel Grand Chancellor, Brisbane, August 2018. Topic: emerging treatments in heart failure
17. Saliva Technology Application Research Symposium (STARS), Queensland University of Technology, Brisbane, July 2018. Topic: a spit test for heart failure? (Keynote speaker)
18. Annual Women's and Children's Health Update, Royal International Convention Centre, Brisbane, June 2018. Topic: heart failure in women
19. Expert Scientific Forum on MRAs in Heart Failure- following CSANZ New Zealand Annual Scientific Meeting opening ceremony, Christchurch, New Zealand, June 2018. Topic: Mineralocorticoid receptor antagonists and HFrEF. (Declined offer for flights and accommodation-talk given via video conferencing)
20. International Clinical Cardiovascular Genetics Conference, Brisbane Convention and Exhibition Centre, May 2018. Topic: what else could it be? (phenocopies) (Arrhythmogenic cardiomyopathies and sudden death session)
21. International Clinical Cardiovascular Genetics Conference, Brisbane Convention and Exhibition Centre, May 2018. Topic: case presentation (cardiomyopathy) panel member (National Collaborations and Case Presentations session)
22. International Clinical Cardiovascular Genetics Conference Educational Day, Brisbane Convention and Exhibition Centre, May 2018. Topic: what the cardiologist must do before considering a genetic test
23. Amgen One Scientific Symposium Cardiovascular Academy, Sofitel Melbourne on Collins, Melbourne, March 2018. Topic: new developments in heart failure with a reduced ejection fraction



### Invited Speaker (J Atherton) (cont):

24. 4<sup>th</sup> International 4 Corners of Cardiology Meeting, Melbourne, February 2018. Topic: neurohormonal antagonists: the past, present and future
25. 4<sup>th</sup> International 4 Corners of Cardiology Meeting Novartis Symposium, Melbourne, February 2018. Topic: practicalities of treating heart failure patients and considerations when prescribing sacubitril/valsartan
26. 2<sup>nd</sup> Australia New Zealand Alliance of Cardiovascular Trials (ANZACT): Co-chair of the Discussion Group on Proposed and Ongoing Trials in Primary Care/ Prevention/ Heart Failure, followed by report to the whole group to identify trials suitable for “support/ endorsement/ promotion” from ANZACT, Melbourne, February 2018.

### Invited Speaker (C Hammett):

1. Philippines Heart Association Annual Convention & Scientific Meeting, 24 May 2018. Plenary Lecture. Topic: Dual Antiplatelet Therapy and Anticoagulation in NVAf patients undergoing PCI
2. Philippines Heart Association Annual Convention & Scientific Meeting, 24 May 2018. Dinner Symposium. Topic: Practical Perspectives for Stroke Prevention in AF Patients: spotlight on the 2018 EHRA Guidelines
3. 2018 Cardiology Congress Round Up. Sydney 15 September 2018. Topic: ACS/PCI update
4. Cardiac Society of Australia and New Zealand 66<sup>th</sup> Annual Scientific Meeting, Brisbane 3 August 2018. Breakfast Symposium. Topic: Out with the Old and In with the New – Atrial Fibrillation and PCI – Challenges and Perspectives
5. University of Sydney NHMRC Clinical Trials Centre Masterclass on Diabetes and Vascular Disease, Sydney 17 June 2018. Topic: Triple Antithrombotic Therapy in Problem Patients
6. Pfizer Cardiovascular Forum, Sydney 26-27 May 2018. Topic: ACS and AF and the role of NOACs over the long term (Workshop)
7. ADVANCE Symposium (Cardiology Advanced Trainee Symposium), Sydney 5-6 May 2018. Topic: Acute Coronary Syndromes – Secondary Prevention
8. Bayer Thrombosis College Cardiovascular Alliance 4<sup>th</sup> Annual Meeting, Sydney 28-29 April 2018. Plenary talk and workshops. Topics: Triple Therapy 2018 (Antithrombotics and Antiplatelets) – Balancing Conflicting Priorities.

### Invited Speaker (S Prasad):

1. Cardiac Society of Australia and New Zealand ASM, Brisbane, August 2018. Topic: Stress Echocardiography in HFpEF
2. Australasian Society of ultrasound in Medicine Annual Scientific Meeting Auckland, NZ, August 2018. Topic: Beyond the Filling – Advances in the Assessment of Diastolic Function
3. Australasian Society of Ultrasound in Medicine Annual Scientific Meeting, Auckland, NZ, August 2018. Topic: Mechanical Complications of myocardial Infarction
4. Australasian Society of Ultrasound in Medicine Annual Scientific Meeting, Auckland, NZ, August 2018. Topic: Echo After Dark: Complex On-call Echocardiograms
5. Australasian Society of Ultrasound in Medicine (ASUM) Surf, Sand and Soundwaves Conference, Kingscliff, NSW, March 2018. Topic: Complex Pericardial Cases
6. ASUM Surf, Sand and Soundwaves Conference, Kingscliff, NSW, March 2018. Topic: Complex Valvular Cases
7. Cardiac Imaging in Cardiomyopathies and Heart Failure, Royal Brisbane and Women’s Hospital Edwin M Tooth Auditorium, November 2018 (Australasian Society for Ultrasound in Medicine (ASUM) Course: 6.75 myASUM CPD/CME points). Topic: Imaging in HFpEF – an overview).

### Invited Speaker (A Dahiya):

1. Cardiac Imaging in Cardiomyopathies and Heart Failure, Royal Brisbane and Women’s Hospital Edwin M Tooth Auditorium, November 2018 (Australasian Society for Ultrasound in Medicine (ASUM) Course: 6.75 myASUM CPD/CME points) Topic: Arrhythmogenic Right Ventricular Cardiomyopathy
2. Cardiac Imaging in Cardiomyopathies and Heart Failure, Royal Brisbane and Women’s Hospital Edwin M Tooth Auditorium, November 2018 (Australasian Society for Ultrasound in Medicine (ASUM) Course: 6.75 myASUM CPD/CME points). Topic: Left Ventricular Non-Compaction. Australasian Society of Ultrasound in Medicine (ASUM) Surf, Sand and Soundwaves Conference, Kingscliff, NSW, March 2018. Topic: Aortic Regurgitation – ASE Guidelines Update
3. Australasian Society of Ultrasound in Medicine (ASUM) Surf Sand and Soundwaves Conference, Kingscliff, NSW, March 2018. Topic: Mitral Stenosis
4. Australasian Society of Ultrasound in Medicine (ASUM) Surf, Sand and Soundwaves Conference, Kingscliff, NSW, March 2018. Topic: Constrictive Pericarditis.

### Invited Speaker: (A Lo)

1. Cardiac Imaging in Cardiomyopathies and Heart Failure, Royal Brisbane and Women’s Hospital Edwin M Tooth Auditorium, November 2018 (Australasian Society for Ultrasound in Medicine (ASUM) Course: 6.75 myASUM CPD/CME points). Topic: Hypertrophic Cardiomyopathy – Assessment with Echocardiography
2. Australasian Society of Ultrasound in Medicine (ASUM) Surf, Sand and Soundwaves Conference, Kingscliff, NSW, March 2018. Topic: Aortic Stenosis – Low flow low gradient
3. Australasian Society of Ultrasound in Medicine (ASUM) Surf, Sand and Soundwaves Conference, Kingscliff, NSW, March 2018. Topic: Mitral Regurgitation – ASE Guideline Update
4. Australasian Society of Ultrasound in Medicine (ASUM) Surf, Sand and Soundwaves Conference, Kingscliff, NSW, March 2018. Topic: Assessment of Pericardial Effusion.

### Invited Speaker: (Others)

1. Cardiac Imaging in Cardiomyopathies and Heart Failure, Royal Brisbane and Women's Hospital Edwin M Tooth Auditorium, November 2018 (Australasian Society for Ultrasound in Medicine (ASUM) Course: 6.75 myASUM CPD/CME points). Topic: Hypertrophic Cardiomyopathy – Assessment with CT/MRI. (**John Younger**)
2. Cardiac Imaging in Cardiomyopathies and Heart Failure, Royal Brisbane and Women's Hospital Edwin M Tooth Auditorium, November 2018 (Australasian Society for ultrasound in Medicine (ASUM) Course: 6.75 myASUM CPD/CME points). Topic: cardiac Sarcoid. (Charles Chao)
3. Cardiac Imaging in Cardiomyopathies and Heart Failure, Royal Brisbane and Women's Hospital Edwin M Tooth Auditorium, November 2018 (Australasian Society for Ultrasound in Medicine (ASUM) Course: 6.75 myASUM CPD/CME points). Topic: Imaging in Cardiomyopathies: what the EP doc needs. (**Paul Martin**).

### Other Communications and Outputs:

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#### Journal Abstracts:

1. Clark RA, Marin TS, Atherton JJ, Bradley J, Foote J, Grover S, Karapetis CS, Peters R, SelvaNayagam S, Koczwara B. Cardiotoxicity after cancer treatment: comparing clinical practice with guidelines. *J Card Fail* 2018;24(8): S8
2. Yu A, Rowe M, Atherton J, Dahiya A. A rare case of single right coronary artery with absent left main coronary artery. *Heart Lung Circ* 2018;27: S212
3. Prasad A, Lancini D, Guppy-Coles K, Atherton J, Thomas L, Prasad S. Predictors of new-onset atrial fibrillation following myocardial infarction. *Heart Lung Circ* 2018;27: S264
4. Wong W, Nunan T, Hickey A, Denaro C, Adsett J, Peters R, Atherton J. From hospital to home: Insights from the Queensland statewide heart failure support services registry on heart failure transitional care. *Heart Lung Circ* 2018;27: S103
5. Prasad A, Lancini D, Guppy-Coles K, Atherton J, Thomas L, Prasad S. Prognostic value of left atrial function following myocardial infarction. *Heart Lung Circ* 2018;27: S266
6. Guppy-Coles K, Sippel J, Smith K, Inglis P, Lo A, Atherton J, Prasad S. Accuracy of Oncology Nurses Performing Three-Dimensional left ventricular ejection fraction assessment on previously-acquired image acquisitions. *Heart Lung Circ* 2018;27: S212-S213
7. Wong Y, Hickey A, Nunan T, Adsett J, Denaro C, Peters R, Atherton J. Gender differences in patient characteristics and quality-of-care indicators among referrals to Queensland statewide heart failure support services. *Heart Lung Circ* 2018;27: S104
8. Coppock C, Singh S, Guppy-Coles K, Armstrong J, Beard P, Atherton J. Correlation between key diastolic parameters and outcomes in patients with myocardial infarction. *Heart Lung Circ* 2018;27: S89-S90
9. Dahiya A, Abdul Razak K, Hawkins A, Khoo T, Burrage M, Challa V, Atherton J, Jackson R. Early detection of cardiac structural and functional abnormalities in adult myotonic dystrophy type 1 patients using advanced cardiac magnetic resonance imaging. *Heart Lung Circ* 2018;27: S236
10. Ha T, Atherton J, Chuan F, Douglas C, Ellem F, Mok L, Robertson L, Shah S, Steel L, Wood B, Rofail S. Sacubitril-Valsartan: snapshot of a new heart failure medication. *Heart Lung Circ* 2018;27: S128
11. Atherton J, Branagan M, Sindone A, Abhayaratna W, Driscoll A, De Pasquale C, Hopper I, MacDonald P, Kistler P, Newton P, Audehm R, Briffa T, Wong J, O'Loughlin J, Thomas L. The National Heart Foundation of Australia and Cardiac Society of Australia and New Zealand guidelines for the prevention, detection, and management of chronic heart failure in Australia 2018. *Heart Lung Circ* 2018;27: S139-S140
12. Wicramasingha Arachchilage NTK, Zhang X, Atherton J, Kostner K, Subramaniam VN, Chan W, Fraser J, Adourian A, Punyadeera C. Salivary galectin-3 in heart failure management. *Saliva Technology Application Research Symposium, Queensland University of Technology, Brisbane, June 2018*
13. Zhang X, Schulz B, Atherton J, Kostner K, Punyadeera C. The development and validation of a salivary protein panel to diagnose heart failure. *Saliva Technology Application Research Symposium, Queensland University of Technology, Brisbane, June 2018*
14. Wu C-J (Jo), Atherton J, MacIsaac R, MacIsaac A, Chang AM, Kostner K, Courtney M, McPhail S. The relationships of self-efficacy and gender in a cardiac-diabetes transcare program: A preliminary analysis. *Asian Pacific Society of Cardiology Congress, Taipei, Taiwan, May 2018*
15. Razak AK, Hawkins AM, Khoo TK, Burrage MK, Atherton JJ, Challa V, Jackson RV, Dahiya A. Early detection of cardiac structural and functional abnormalities in adult myotonic dystrophy type 1 patients using advanced cardiac magnetic resonance imaging. *Cardiac Magnetic Resonance (CMR) 2018, Barcelona, Spain, February 2018 (poster presentation)*
16. Scott A, McDonald A, Roberts T, Scuffham P, Atherton J. Tele-Cardiac Investigations is transforming access to treatment for patients living in rural Queensland. *Exercise and Sports Science Australia, Brisbane, 2018*
17. Lancini D, Dahiya A, Lo A, Prasad S, Martin, P. In sickness and in health – coincidental cardiac sarcoid in a husband and wife. *Heart Lung Circulation* 2018;27: s90-91
18. Peverill W, Jalali H, Prasad S. Successful Repair of Unileaflet Mitral Valve with Severe Mitral Regurgitation *Heart Lung Circulation* 2018;27: s100-101.

## Department of Clinical Immunology and Allergy

### 2018 Current RBWH Research Group / Department Led Research Activity

RBWH Research Group/Department Lead Researchers	Collaborative Researchers	Research Project Title
Andrew Redmond, Yannick Emond, Amy Legg, Peter Groom, Roger Prentice		Recognition and Evaluation of Antibiotic Allergies to improve patient Care in Hospital (REACH)
Dwaaraka Ranganathan, Yumi Oh, Katharine Foster, Daniel Schuster		Retrospective study of prevalence and type of infections in patients with renal ANCA associated vasculitis and their risk factors

### 2018 Research Publications

#### Journal Articles:

1. Langguth D, Schuster D. Making sense of autoantibodies. Common Sense Pathology in Australian Doctor (Dec 2018).

## Department of Clinical Pharmacology

The Department of Clinical Pharmacology has a number of research focuses, across multiple professional disciplines, reflecting the multidisciplinary makeup of the department. Research staff work collaboratively with the Department of Pharmacy, in areas related to medication safety, the quality use of medicines. Clinical Pharmacology continues to work collaboratively with other hospitals within Metro North Hospital and Health Service (Prince Charles Hospital) and Brisbane (Princess Alexandra Hospital). In addition, the department continues to focus on the role of individualised feedback, of both nursing and medical staff, related to the safety of prescribing and administration of medicines. Karen Davies, Clinical Nurse Consultant for Medication Safety continues to pursue this work and continues with her PhD studies. A particular focus of medication safety relates to inpatient anticoagulant use. A RBWH foundation grant was utilised to attempt to elucidate a therapeutic range for enoxaparin in renal impairment, a Metro North SEED grant is being used to pilot a Support Service for anticoagulant use in two units at RBWH and a systematic review is being undertaken to establish the evidence base for other interventions to improve this practice. Further, we have started a large study, in collaboration, assessing the benefits of implementing an electronic prescribing system at RBWH and Caboolture Hospital. Research is also expanding into the safe and appropriate use of opioids within not only within RBWH, but Metro North and Queensland. Lastly, Dr Donovan, Director of Clinical Pharmacology, continues to expand his research interests in the cost-effectiveness of health care and continues to work collaboratively with researchers from within and external to RBWH, including a successful NHMRC project grant in collaboration with, amongst others, QIMR Berghofer.

### 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)
Brooke Myers	PhD, UQ (2014 – current)	Role of the Pharmacist on the Medical Post-Take Ward Round	<b>Ian Coombes</b> , Charles Mitchell, <b>Peter Donovan</b> , Jennifer Whitty
Karen Davies	PhD, UQ (2016 – current)	Establishing the validity and reliability of a tool to test competency of nursing medication administration practice using an expert panel review and inter-rater and intra-rater reliability testing	<b>Karen Whitfield</b> , <b>Ian Coombes</b> , Samantha Keogh

### 2018 Current RBWH Research Group / Department Led Research Activity

RBWH Research Group/Department Lead Researchers	Collaborative Researchers	Research Project Title
<b>Karen Davies</b>	<b>Karen Whitfield</b> , <b>Ian Coombes</b> , Samantha Keogh	Establishing the validity and reliability of a tool to test competency of nursing medication administration practice using an expert panel review and inter-rater and intra-rater reliability testing
<b>Peter Donovan</b>	Michael Barras, (Princess Alexandra Hospital), <b>Ian Coombes</b> , <b>Jason Roberts</b> , <b>Ms Carla Scuderi (Pharmacy)</b> , <b>Charles Denaro (Internal Medicine)</b> , <b>John Atherton</b> , Ms Bonnie Tai (Prince Charles Hospital), Ms Anita Pelecanos (QIMR Berghofer)	Development of a therapeutic range for enoxaparin in patients with renal impairment
<b>Peter Donovan</b>	<b>Ian Coombes</b> , <b>Glen Kennedy (Cancer Care Services)</b> , <b>Alison Mudge (Internal Medicine)</b> , <b>Champika Pattullo (Clinical Pharmacology)</b> , Bonnie Tai (Prince Charles Hospital)	Collaborative Optimisation of Anticoagulation (COAG) Pilot Study at RBWH
<b>Peter Donovan</b>	<b>Alison Mudge</b> , Jenny Martin (Uni Newcastle), Michael Barras (Princess Alexandra Hospital), <b>James Rowland</b> , <b>Champika Pattullo</b>	Interventions to improve safety and quality in the management of anticoagulants for therapeutic indications in hospital inpatients: systematic review
<b>Peter Donovan</b>	Nicola Harper, Dr Danielle Stowasser, Natasha Truloff (Metro North IT), <b>Ian Coombes (Pharmacy)</b> , <b>Charles Denaro (Internal Medicine)</b> , Timothy Dunn (Caboolture Hospital Pharmacy), Anita Pelecanos (QIMR Berghofer)	Evaluation of the Implementation of Electronic Prescribing using Interrupted Time-Series Analysis at Two Hospitals in Queensland
<b>Peter Donovan</b>	<b>Champika Pattullo</b> , Anthony Bell, David Arroyo	Trends in Opioid Prescribing in Australia: a Systematic Review



## 2018 Collaborative Research Activity involving RBWH Research Group / Department

Collaborative Lead Researchers	RBWH Researchers	Research Project Title
Dr Susan Jordan (Queensland Institute of Medical Research Berghofer), Prof Sallie-Anne Pearson (University of New South Wales), Dr Nirmala Pandeya (University of Queensland), Assoc Prof Michael Coory (Murdoch Children's Research Institute), Dr Katrina Spillsbury (Curtin University of Technology)	<b>Peter Donovan</b>	IMPROVE – Investigating Medication Re-Purposing to Reduce risk of Ovarian cancer and Extend survival
<b>Louise Cullen</b> (Emergency and Trauma Centre)	<b>Nathan Brown, Peter Donovan, Ian Coombes, Jaimi Greenslade, David Hughes, Elizabeth Doran</b>	Prevalence and characteristics of medication-related presentations to the emergency department. Emergency and Trauma Centre, Royal Brisbane and Women's Hospital
<b>Phillip Robinson (Rheumatology)</b>	<b>Peter Donovan</b> , Nicola Dalbeth (University of Auckland, Auckland Hospital)	A Health Economic Analysis Colchicine Therapy for Gout Prophylaxis
<b>Ian Coombes (Pharmacy)</b>	<b>Peter Donovan</b> , Charles Mitchel (UQ), Brooke Myers, Christy Noble, (Gold Coast University Hospital, Griffith University)	Improving Intern Medical Officer Prescribing through an Intervention of Self-Assessment and Feedback
<b>Don McLeod (Endocrinology)</b>	<b>Peter Donovan, Roger Allison (Cancer Care), Susan Thomas (Cancer Care), Lee Tripcony (Cancer Care)</b>	Validating a response to therapy risk stratification system for Medullary Thyroid Cancer

## 2018 Research Grants – Awarded

Investigators <i>(RBWH staff in bold)</i>	RBWH Research Groups/ Departments	Project Title	Granting Body	Amount in 2018	Total Amount <i>(years)</i>
<b>Karen Davies</b>	Clinical Pharmacology	Establishing the validity and reliability of a tool to test competency of nursing medication administration practice using an expert panel review and inter-rater and intra-rater reliability testing	RBWH Foundation Scholarship	\$36,863.96	\$36,863.96 (2018)
Dr Susan Jordan (Queensland Institute of Medical Research Berghofer), Prof Sallie-Anne Pearson (University of New South Wales), Dr Nirmala Pandeya (University of Queensland), Assoc Prof Michael Coory (Murdoch Children's Research Institute), Dr Katrina Spillsbury (Curtin University of Technology), <b>Dr Peter Donovan</b>	Clinical Pharmacology, Internal Medicine and Aged Care	IMPROVE – Investigating Medication Re-Purposing to Reduce risk of Ovarian cancer and Extend survival	National Health and Medical Research Council	\$95,104	\$438,313.20 (2017-2021)
<b>Louise Cullen, Nathan Brown, Peter Donovan, Ian Coombes, Jaimi Greenslade, David Hughes, Elizabeth Doran</b>	Emergency and Trauma Centre, Pharmacy, Clinical Pharmacology, Internal Medicine and Aged Care	Prevalence and characteristics of medication-related presentations to the emergency department. Emergency and Trauma Centre, Royal Brisbane and Women's Hospital	Emergency Medicine Foundation	\$31,410	\$31,410 (2018)

## 2018 Research Publications

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### Journal Articles:

1. **Davies, K. M., Coombes, I. D., Keogh, S., & Whitfield, K. M.** Medication administration evaluation tool design: an expert panel review. *Collegian*. doi: 10.1016/j.collegn.2018.05.001
2. **Philip C. Robinson**, Nicola Dalbeth and **Peter Donovan**. The Cost-effectiveness of Biannual Serum Urate (SU) Monitoring after Reaching Target in Gout: A Health Economic Analysis Comparing SU Monitoring. *The Journal of Rheumatology* (2018). DOI: 10.3899/jrheum.170199.

## 2018 Conference Presentations – Invited Speaker, Oral and Poster

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### Invited Speaker:

1. **Davies, K. M.**, “Be Safe, Be Accountable and Be Confident” presentation. *Ausmed Medicines and Midwives Conference 2018*. Brisbane, Australia.

### Oral Presentations:

1. **Davies, K. M., Coombes, I. D., Keogh, S., Hay, K., Hurst, C. & Whitfield, K. M.** “Medication Administration Evaluation and Feedback Tool: Simulation Intra-rater and Inter-rater Validation” presentation. *The National Nursing Forum 2018*. Gold Coast, Australia
1. **Davies, K. M., Coombes, I. D., Keogh, S., & Whitfield, K. M.** “Medication administration evaluation tool design: an expert panel review” *Nursing and Midwifery Conference Presentation 2018*. Brisbane, Australia.

### Poster Presentations:

1. **Davies, K. M., Coombes, I. D., Keogh, S., Hay, K., Hurst, C. & Whitfield, K. M.** “Medication Administration Evaluation and Feedback Tool: Intra-rater and Inter-rater Using Simulation” poster. *SHPA Medicines Management Conference 2018*. Brisbane, Australia
1. **Davies, K. M., Coombes, I. D., Keogh, S., & Whitfield, K. M.** “Medication Administration Evaluation and Feedback Tool: Supporting Safe Medication Practice” poster. *RBWH Symposium 2018*. Brisbane, Australia
1. **Davies, K. M., Coombes, I. D., Keogh, S., Hay, K., Hurst, C. & Whitfield, K. M.** “Medication Administration Evaluation and Feedback Tool: Intra-rater and Inter-rater Using Simulation” poster. *RBWH Symposium 2018*. Brisbane, Australia
2. **Ian Coombes, Peter Donovan**, Brooke Myers, Christy Noble, Charles Mitchell. Improving Intern Medical Officer Prescribing through an Intervention of Self-Assessment and Feedback. Australasian Society of Experimental and Clinical Pharmacologist and Toxicologist Annual Scientific Meeting, Nov 2018 1
3. **Pattullo, C., Lock, C., Savage, R. Bell, A.** Opioid Prescribing Toolkit. International Forum on Quality and Safety in Healthcare, Melbourne. Aug 2018.

## Department of Endocrinology and Diabetes

The Department of Endocrinology and Diabetes conducts a number of research activities within the department and collaborates with a number of other research units within the hospital and in other institutions.

The Department has an active clinical trials centre undertaking a number of externally funded clinical trials in focusing on diabetes and in particular on the prevention of cardiovascular disease in diabetes with **Assoc Prof Michael d'Emden** being the principle investigator. The unit has participated in several of the landmark trials which have changed the practice of medicine – TNT, LIPID, FIELD, EMPA-REG, DECLARE to mention a few.

**Professor Emma Duncan** has a major role within the Department to promote and undertake research. There are now 3 doctoral students. The department has developed strong links with several research departments and has started major clinical studies in several areas including:

- HIV disease and bone
- Pheochromocytoma and bone disease
- Genetics of Pheochromocytoma
- Genetics of Thyroid Cancer
- Genetics of Skeletal Dysplasia
- Genetics of Osteogenesis imperfecta
- Genome wide association studies of osteoporosis.

**Dr Don McLeod** leads the thyroid service and is pursuing research in aspects of the epidemiology of Thyroid Cancer and has a major on-going study looking at auto-immune thyroid disease in the United States armed forces, a model of stress-induced auto-immunity.

**Associate Professor Kerry Richard** who supervises the endocrine division of the conjoined internal medical laboratory continues to be a world leader in the study of thyroid hormone transport in the placenta and was invited to be a “meet the professor” at the most recent American Thyroid Association meeting.

### Supervised Post-Graduate Research Students

Name <i>(RBWH staff in bold)</i>	Current Studies <i>(e.g. PhD, Masters etc.)</i> University <i>(duration)</i>	Research Project Title	Supervisors <i>(RBWH staff in bold)</i>
Aideen McInerney-Leo	PhD; UQ (2014-2018)	Exome sequencing for gene discovery and genetic testing in Mendelian disorder	<b>Emma Duncan</b>
Stephanie Johnson	PhD; UQ; (2014-2018)	Disorders of insulin secretion	<b>Emma Duncan</b>
Xiao Bao	PhD; Uni of Zhengzhou; (2014-2018)	The genetics of complex diseases including osteoporosis and cervical cancer	<b>Emma Duncan</b>
<b>Naomi Achoong</b>	PhD studies; UQ; (2014-2018)	Insulin secretion in pregnancy and the postpartum period	<b>Emma Duncan</b>
<b>Sheila Cook</b>	PhD studies; UQ; (2018-)	The effect of a low carbohydrate diet on clinical outcomes for patients with Type 1 Diabetes Mellitus	<b>Emma Duncan</b>
<b>Andrea Fernandes</b>	PhD; UQ; (2018-)	The Endocrinology of Chronic Renal Disease	<b>Emma Duncan</b>
Jessica Harris	MSc; UQ; (2017-2018)	Genetics of Endocrine Tumours	<b>Emma Duncan</b>
<b>Fiona Britten</b>	MSc; UQ; (2014-)	Breastfeeding in mothers with type 2 diabetes mellitus	<b>Emma Duncan</b>
<b>Kelly Carruthers</b>	MSc; UQ; (2016-)	The Genetics of Familial Non-Medullary Thyroid Cancer	<b>Emma Duncan</b>

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

Name	Type of Fellowship	Research Program	University <i>(years)</i>
<b>Helen Legg</b>	Clinical Trials Coordinator	Diabetes and Cardiovascular Disease	
<b>Liz Lahz</b>	Clinical Trials Coordinator	Diabetes and Cardiovascular Disease	
<b>Erika Tapp</b>	Clinical Trials Coordinator	Diabetes and Cardiovascular Disease	

## 2018 Current RBWH Research Group / Department Led Research Activity

RBWH Research Group/ Department Lead Researchers	Collaborative Researchers	Research Project Title
Emma Duncan		Using large scale genome-wide association studies to identify pharmacological targets for osteoporosis intervention
Emma Duncan		The Role of 'Orphan' Solute Carrier Transporter Slc37a2 in Bone Homeostasis and Disease
Don McLeod		Does stress cause Graves' disease
Kerry Richard	Kelly Landers, Michael d'Emden	The influence of maternal health and lifestyle on placental thyroid hormone transport and metabolism
Kerry Richard	Kelly Landers, Michael d'Emden	The role of the high density lipoprotein receptor scavenger receptor class B member 1 (SR-B1) in placental transfer of thyroid hormone

## 2018 Research Grants – Awarded

Investigators (RBWH staff in bold)	RBWH Research Groups/ Departments	Project Title	Granting Body	Amount in 2018	Total Amount (years)
Emma Duncan	Endocrinology	Using large scale genome-wide association studies to identify pharmacological targets for osteoporosis intervention	NHMRC	\$270,000	\$270,000
Emma Duncan	Endocrinology	The Role of 'Orphan' Solute Carrier Transporter Slc37a2 in Bone Homeostasis and Disease	NHMRC	\$220,000	\$675668.40
Emma Duncan	Endocrinology	Cancer Care Program	QUT	\$10,000	\$10,000
Emma Duncan	Endocrinology	Non-invasive assessment of osteoporosis and bone health in individuals with chronic kidney disease	Amgen	\$40,000	\$40,000
Don McLeod	Endocrinology	Does stress cause Graves' disease	NHMRC	\$190,000	\$565,000
Kerry Richard	Endocrinology	The role of the high density lipoprotein receptor scavenger receptor class B member 1 (SR-B1) in placental transfer of thyroid hormone	Science and Education Research Committee	50,000	50,000

## 2018 Research Publications

### Journal Articles:

- Stephanie R Johnson, Hannah E Carter, Paul Leo, Samantha A Hollingworth, Elizabeth A Davis, Timothy W Jones, Louise S Conwell, Mark Harris, Matthew A Brown, Nicholas Graves, **Emma L Duncan**. "Cost-effectiveness analysis of routine screening using massively parallel sequencing for maturity-onset diabetes of the young in a paediatric diabetes cohort: reduced health system costs and improved patient quality of life." *Diabetes Care*, ePub 6 Dec 2018 (doi 10.2337/dc18-0261)
- Bao X, Hanson AL, Madeleine MM, Wang SS, Schwartz SM, Newell F, Pettersson-Kymmer U, Hemminki K, Tiews S, Steinberg W, Rader JS, Castro F, Safaeian M, Franco EL, Coutlée F, Ohlsson C, Cortes A, Marshall M, Mukhopadhyay P, Cremin K, Johnson LG, Garland SM, Tabrizi SN, Wentzensen N, Sitas F, Trimble C, Little J, Cruickshank M, Frazer IH, Hildesheim A, Brown MA, **Duncan EL**, Sun Y, Leo PJ (2018). "HLA and KIR associations of Cervical Neoplasia". *J Infect Dis*, 218(12):2006-2015
- Benn DE, Zhu Y, Andrews KA, Wilding M, **Duncan EL**, Dwight T, Tothill RW, Burgess J, Crook A, Gill AJ, Hicks RJ, Kim E, Luxford C, Marfan H, Richardson AL, Robinson B, Schlosberg A, Susman R, Tacon L, Trainer A, Tucker K, Maher ER, Field M and Clifton-Bligh RJ (2018) "Bayesian approach to determining penetrance of pathogenic SDH variants." *J Med Genet* 55(11): 729-734
- Trajanoska K, Morris JA, Oei L, Zheng HF, Evans DM, Kiel DP, Ohlsson C, Richards JB, Rivadeneira F, GEFOS consortium (including AOGC lead **Duncan EL**), GENOMOS consortium and 23andMe (2018) "Assessment of the genetic and clinical determinants of fracture risk: genome wide association and mendelian randomisation study." *BMJ* 362: k3225
- Maharaj A, Buonocore F, Meimaridou E, Ruiz-Babot G, Guasti L, Peng H-M, Capper CP, Prasad R, Crowne E, Cheetham TD, Brain CE, Suntharalingham JP, Striglioni N, Yuksel B, Gurbuz F, Lindsay R, Couch R, Spoudeas HA, Guran T, Johnson S, Fowler D, Conwell LS, McInerney-Leo AM, Drui D, Cariou B, Lopez Siguero JP, Harris M, **Duncan EL**, Auchus RJ, Hindmarsh PC, Donaldson MD, Achermann JC, Metherell LA (2018) "Predicted Benign and Synonymous Variants in *CYP11A1* Cause Primary Adrenal Insufficiency Through Missplicing" *J Endocrin Soc*, ePub 30 October 2018 <https://doi.org/10.1210/js.2018-00130>
- Johnson SR, Ellis JJ, Leo P, Anderson LK, Ganti U, Harris JE, Curran JA, McInerney-Leo A, Paramalingam N, Song X, Conwell LS, Harris M, Jones TW, Brown MA, Davis EA, **Duncan EL**. "Comprehensive genetic screening: The prevalence of maturity-onset diabetes of the young gene variants in a population-based childhood diabetes cohort". *Pediatr Diabetes* 20 (1):57-64



## Journal Articles: (cont):

7. Maung KZY, Leo PJ, Bassal M, Casolari DA, Gray JX, Bray SC, Pederson S, Singhal D, Samaraweera SE, Nguyen T, Cildir G, Marshall M, Ewing A, **Duncan EL**, Brown MA, Saal R, Tergaonkar V, To LB, Marlton P, Gill D, Lewis I, Deans AJ, Brown AL, D'Andrea RJ, Gonda TJ. (2018) Rare variants in Fanconi anemia genes are enriched in acute myeloid leukemia. *Blood Cancer J*. 8(6):50
8. Johnson SR, Leo P, Conwell LS, Harris M, Brown MA, **Duncan EL** (2018) "Clinical usefulness of comprehensive genetic screening in maturity onset diabetes of the young (MODY): a novel ABCC8 mutation in a previously screened family." *J Diab* 10(9): 764-767
9. Gregson CL, Newell F, Leo PJ, Clark GR, Paternoster L, Marshall M, Forgetta V, Morris JA, Ge B, Bao X, Duncan Bassett JH, Williams GR, Youlten SE, Croucher PI, Davey Smith G, Evans DM, Kemp JP, Brown MA, Tobias JH and **Duncan EL** (2018) "Genome-wide association study of extreme high bone mass: Contribution of common genetic variation to extreme BMD phenotypes and potential novel BMD-associated genes." *Bone* 114: 62-71
10. Johnson SR, McGown I, Oppermann U, Conwell LS, Harris M, **Duncan EL** (2018). "A novel INS mutation in a family with MODY: variable insulin secretion and putative mechanisms." *Paediatr Diabetes* 19(5): 905-9
11. Cundy T, Dray M, Delahunt J, Hald JD, Langdahl B, Li C, Szybowska M, Mohammed S, **Duncan EL**, McInerney-Leo AM, Wheeler PG, Roschger P, Klaushofer K, Rai J, Weis M, Eyre D, Schwarze U and Byers PH (2018) "Mutations That Alter the Carboxy-Terminal-Propeptide Cleavage Site of the Chains of Type I Procollagen Are Associated With a Unique Osteogenesis Imperfecta Phenotype." *J Bone Miner Res* 33(7): 1260-1271
12. Johnson SR, Leo PJ, McInerney-Leo AM, Anderson LK, Marshall M, McGown I, Newell F, Brown MA, Conwell LS, Harris M and **Duncan EL** (2018) "Whole-exome sequencing for mutation detection in pediatric disorders of insulin secretion: maturity onset diabetes of the young and congenital hyperinsulinism." *Pediatr Diabetes* 19(4) 656-62
13. Sztot JO, Cuny H, Blue GM, Humphreys DT, Ip E, Harrison K, Sholler GF, Giannoulou E, Leo P, **Duncan EL**, Sparrow DB, Ho JWK, Graham RM, Pachter N, Chapman G, Winlaw DS and Dunwoodie SL (2018) "A Screening Approach to Identify Clinically Actionable Variants Causing Congenital Heart Disease in Exome Data." *Circ Genom Precis Med* 11(3): e001978
14. Alonso N, Estrada K, Albagha OME, Herrera L, Reppe S, Olstad OK, Gautvik KM, Ryan NM, Evans KL, Nielson CM, Hsu YH, Kiel DP, Markozannes G, Ntzani EE, Evangelou E, Feenstra B, Liu X, Melbye M, Masi L, Brandi ML, Riches P, Daroszewska A, Olmos JM, Valero C, Castillo J, Riancho JA, Husted LB, Langdahl BL, Brown MA, **Duncan EL**, Kaptoge S, Khaw KT, Usategui-Martin R, Del Pino-Montes J, Gonzalez-Sarmiento R, Lewis JR, Prince RL, D'Amelio P, Garcia-Giralt N, Noguez X, Mencej-Bedrac S, Marc J, Wolstein O, Eisman JA, Oei L, Medina-Gomez C, Schraut KE, Navarro P, Wilson JF, Davies G, Starr J, Deary I, Tanaka T, Ferrucci L, Gianfrancesco F, Gennari L, Lucas G, Elosua R, Uitterlinden AG, Rivadeneira F and Ralston SH (2018) "Identification of a novel locus on chromosome 2q13, which predisposes to clinical vertebral fractures independently of bone density." *Ann Rheum Dis* 77(3): 378-385
15. McInerney-Leo AM, Wheeler L, Sturm RA, Tan JM, Harris JE, Anderson L, Jagirdar K, Brown MA, Leo PJ, Soyer HP and **Duncan EL** (2017) "Point mutation in p14(ARF) -specific exon 1beta of CDKN2A causing familial melanoma and astrocytoma." *Br J Dermatol* 178(4): e263-e264
16. Shi H, Enriquez A, Rapadas M, Martin E, Wang R, Moreau J, Lim CK, Sztot JO, Ip E, Hughes JN, Sugimoto K, Humphreys DT, McInerney-Leo AM, Leo PJ, Maghzal GJ, Halliday J, Smith J, Colley A, Mark PR, Collins F, Sillence DO, Winlaw DS, Ho JWK, Guillemain GJ, Brown MA, Kikuchi K, Thomas PQ, Stocker R, Giannoulou E, Chapman G, **Duncan EL**, Sparrow DB and Dunwoodie SL (2017) "NAD Deficiency, Congenital Malformations, and Niacin Supplementation." *N Engl J Med* 377(6): 544-552
17. Flynn A, Dwight T, Benn D, Deb S, Colebatch AJ, Fox S, Harris J, **Duncan EL**, Robinson B, Hogg A, Ellul J, To H, Duong C, Miller JA, Yates C, James P, Trainer A, Gill AJ, Clifton-Bligh R, Hicks RJ and Tothill RW (2017) "Cousins not twins: intratumoural and intertumoural heterogeneity in syndromic neuroendocrine tumours." *J Pathol* 242(3): 273-283. Images chosen for journal cover
18. **Lazarus S**, Tseng HW, Lawrence F, Woodruff MA, **Duncan EL** and Pettit AR (2017) "Characterization of Normal Murine Carpal Bone Development Prompts Re-Evaluation of Pathologic Osteolysis as the Cause of Human Carpal-Tarsal Osteolysis Disorders." *Am J Pathol* 187(9): 1923-1934
19. English K, Inder WJ, Weedon Z, Dimeski G, Sorbello J, Russell AW, **Duncan EL** and Cuneo R (2017) "Prospective evaluation of a week one overnight metyrapone test with subsequent dynamic assessments of hypothalamic-pituitary-adrenal axis function after pituitary surgery." *Clin Endocrinol (Oxf)* 87(3): 312
20. McInerney-Leo AM, Wheeler L, Marshall MS, Anderson LK, Zankl A, Brown MA, Leo PJ, Wicking C and **Duncan EL** (2017) "Homozygous variant in C21orf2 in a case of Jeune syndrome with severe thoracic involvement: extending the phenotypic spectrum." *Am J Med Genet A* 173(6): 1698-1704
21. Willems, SM., Wright DJ, Day FR et al. (including **Duncan EL** as AOGC lead for GEFOS) (2017) "Large-scale GWAS identifies multiple loci for hand grip strength providing biological insights into muscular fitness". *Nature Communications*, 8 16015
22. Barraza-Garcia J, Rivera-Pedroza CI, Hisado-Oliva A, Belinchon-Martinez A, Sentchordi-Montane L, **Duncan EL**, Clark GR, Del Pozo A, Ibanez-Garikano K, Offiah A, Prieto-Matos P, Cormier-Daire V and Heath KE (2017) "Broadening the phenotypic spectrum of POP1-skeletal dysplasias: identification of POP1 mutations in a mild and severe skeletal dysplasia." *Clin Genet* 92(1): 91-98
23. Seymour MG, **McLeod DSA**. Cardiac effects of thyroid disease. *Endocrinology Today*. 2017; 6: 27-30
24. Gild ML, Topliss DJ, Learoyd D, Parnis F, Tie J, Hughes B, Walsh JP, **McLeod DSA**, Clifton-Bligh R, Robinson B. Clinical guidelines for Radioiodine Refractory Differentiated Thyroid Cancer. *Clinical Endocrinology*, 2018; 88: 529-37
25. **Landers KA**, Li H, Mortimer RH, **McLeod DSA**, **d'Emden MC**, **Richard K**. Transthyretin uptake in placental cells is regulated by the high-density lipoprotein receptor, Scavenger Receptor class B member 1. *Molecular and Cellular Endocrinology*. 2018; 474: 89-96
26. **Landers K and Richard K**. Traversing barriers: how thyroid hormones cross the placental, blood-brain and blood-cerebrospinal fluid barriers. Invited review in *Molecular and Cellular Endocrinology* 2017 <http://dx.doi.org/10.1016/j.mce.2017.01.041>
27. Dawson PA, **Richard K**, Perkins A, Zhang Z and Simmons DG, Review: nutrient sulphate supply from mother to fetus: placental adaptive responses during human and animal gestation. *Placenta*. <http://dx.doi.org/10.1016/j.placenta.2017.01.001>
28. Achong N, **Duncan EL**, McIntyre HD and Callaway L (2018) "The physiological and glycaemic changes in breastfeeding women with type 1 diabetes mellitus." *Diabetes Res Clin Pract* 135: 93-101
29. Lim WH and **Duncan EL** (2017) "Is there a role or target value for nutritional vitamin D in chronic kidney disease?" *Nephrology (Carlton)* 22 Suppl 2: 57-64

### Journal Articles: (cont):

30. Clarke M, Dover T, **Duncan EL** (2017) "New and emerging therapies for osteoporosis." *Endocrinology Today*
31. Thuzar M, Perry-Keene DA, **d'Emden MC, Duncan EL**. (2018) "An adrenocortical carcinoma evolving from an apparently benign adrenal incidentaloma". *AACE Clinical case reports*, 4(1) e65-e69.

### Book Chapters / Letters:

1. Douglas Kiel, **Emma L Duncan**, Fernando Rivedeneira. "Human Genome-Wide Association Studies" Primer for the American Society for Bone and Mineral Research (ed. C. Rosen). In press.

## 2018 Conference Presentations – Invited Speaker, Oral and Poster

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### Invited Speaker:

1. International Osteoporosis Society Regional Conference – Sydney, December 2018
2. American Society for Bone and Mineral Research Annual Scientific Meeting, Montreal, Sept 2018. **Emma Duncan**
3. American Society for Bone and Mineral Research Annual Scientific Meeting, Denver, 2017 – Genomics Workshop presentation. **Emma Duncan**
4. 5<sup>th</sup> International Symposium on Pheochromocytoma-Paraganglioma, Sydney, 2017. **Emma Duncan**
5. Japanese Society for Bone and Mineral Research, Fukuoka, 2017 – invited international speaker. **Emma Duncan**
6. Joint meeting of the Australian and New Zealand Bone and Mineral Society and the International Federation of Musculoskeletal Research Societies, in collaboration with the Japanese Society for Bone and Mineral Research, Brisbane, 2017. **Emma Duncan**.

### Oral Presentations:

1. Annual Scientific Meeting of the Endocrine Society of Australia, Adelaide, 2018. **Emma Duncan**
2. Annual Scientific Meeting of the Australasian Menopause Society, Brisbane, August 2018. **Emma Duncan**
3. Annual Scientific Meeting of the Australasian College of Dermatology, Gold Coast, May 2018. **Emma Duncan**
4. Familial Cancer Clinics Professional Development Day, Kingscliff, 2017. **Emma Duncan**
5. Endocrine Society of Australia Seminar Meeting, Melbourne, 2017. **Emma Duncan**.

## Other Communications and Outputs:

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### Professor Emma Duncan

#### Conference Leadership

##### International:

- American Society of Bone and Mineral Research:
  - Chair of the Genomics, Transcriptomics, Proteomics and Metabolomics of Musculoskeletal Disease category 2018.
- Joint Australian and New Zealand Bone and Mineral Society International Federation of Musculoskeletal Research Societies, in conjunction with the Japanese Bone and Mineral Society Brisbane 2017:
  - Lead chair of Executive Organising Committee:
    - Budget >\$1million.
- International Symposium on Pheochromocytoma and Paraganglioma 2017:
  - Local Organising Committee member.

##### National/Australasian:

- Member, Programme Organising Committee, Endocrine Society of Australia Annual Scientific meeting, 2018
- Member, Programme Committee for ANZBMS Annual Postgraduate Meeting, 2017.

##### Local:

- Committee member (representing Internal Medicine), Royal Brisbane and Women's Hospital Annual Scientific Meeting, 2018.

##### Conference Session Chairperson (International and National):

- American Society for Bone and Mineral Research Annual Scientific Meeting 2018, 2017:
  - Australian Rheumatology Association Annual Scientific Meeting – joint session with Australian and New Zealand Bone and Mineral Society and Endocrine Society of Australia, Melbourne 2018
  - Australian and New Zealand Bone and Mineral Society Annual Scientific Meeting, 2017, 2018
  - Judge, Young Investigators Presentations, 2018.

### On-Line Opinion Pieces

1. Emma L Duncan "Why do we have bones?". Published online, 29 January 2018
2. Emma L Duncan, Kerrie Sanders, Peter R Ebeling and Warrick J Inder. "How do our bones get calcium, and why do they need it?" Published online, 30 March 2017.

## Department of Gastroenterology and Hepatology

The Gut Health Research group (QIMR Berghofer MRI), working in collaboration with the Department of Gastroenterology at RBWH, and local, national and international colleagues, has focussed on the development of predictors of gut health over the past 12 months. This includes a risk assessment tool for significant colorectal disease, to assist in colonoscopy triage, a risk predictor for high-risk Crohn's disease, and identification of a genetic polymorphism that predicts a healthy gut microbiome. Two of these studies have been published and presented at international meetings. Our team also made it to the finals of the Metro North Research Excellence Awards.

Within the research group focussed on molecular genetics of colorectal cancer, major highlights were publications in the 2 leading journals of the specialty: Gastroenterology and Gut. The Gut publication was in collaboration with Dan Worthley who completed his PhD with our group before taking up a NHMRC fellowship and it used cutting edge organoid technology to demonstrate the genetic changes which cause a serrated polyp to progress to cancer. The Gastroenterology publication showed for the first time that the cancer risk of serrated polyps is heavily dependent on the age of the patient in which the polyp occurs. Polyps of identical size and histology have a much higher risk of progressing if they occur in the proximal colon of older patients. This exciting finding not only opens the door to better understanding of how older tissue is primed for malignancy but can be translated into more efficient surveillance and less colonoscopy.

In 2018, Dr Richard Skoien has presented his basic science research in microRNAs as potential biomarkers of hepatocellular carcinoma (HCC) at international conferences, and is currently investigating their roles in decompensated cirrhosis. He has also further progressed his clinical research into innovative models of care in chronic liver disease, including the novel *HepatoCare* pilot project in palliative and supportive care in advanced cirrhosis, and is leading a clinical audit of spontaneous bacterial peritonitis and other complications in cirrhotic patients of the Liver Unit admitted to the RBWH.

The endoscopy research group has established a research nursing position that has launched a number of clinical studies that we expect to present this year. These include endoscopic outcomes research and pushing the endoscopy boundaries in bariatric patients.

### 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>Lauren White</b>	MPhil UQ/QIMRB (2018-2019)	Introduction of Intestinal Ultrasound to a tertiary Gastrointestinal department	<b>Graham Radford-Smith, Andrew Lee</b>
<b>Abigail Marsh</b>	PhD UQ	The effects of an anti-inflammatory diet on disease activity, symptom severity and microbiota profile in patients with inflammatory bowel disease	<b>Graham Radford-Smith, Veronique Chachay, Merrillyn Banks</b>
Caitlin Hall	PhD UQ/QIMRB	Understanding the relationship between the gut microbiome and the brain	Lucca Cochi, <b>Graham Radford-Smith, Anton Lord</b>
<b>Anthony Croft</b>	MPhil UQ/QIMRB	Risk assessment in acute ulcerative colitis	<b>Graham Radford-Smith, Anton Lord</b>
Yoon-Kyo An	MPhil UQ/TRI/QIMRB	AURORA (Australian Ustekinumab Real-World Observational Research)	Jake Begun, <b>Graham Radford-Smith</b>
Cheng Liu	PhD, UQ (2016-2019)	Molecular characterisation of serrated precursors of colorectal carcinoma	Vicki Whitehall, <b>Barbara Leggett, Neal Walker, Mark Bettington</b>
<b>Jennifer Borowsky</b>	PhD, UQ (PT 2016-2021)	Morphological and molecular characterisation of colorectal adenomas and carcinomas	Vicki Whitehall, <b>Barbara Leggett, Neal Walker, Ian Brown, Mark Bettington</b>
<b>Alexandra Kane</b>	PhD, UQ (2017-2019)	Chemoprevention of serrated colorectal neoplasia	Vicki Whitehall, <b>Barbara Leggett</b>
Lochlan Fennell	PhD, UQ (2018-2020)	Investigation of the colorectal cancer epigenome	Vicki Whitehall, <b>Barbara Leggett</b>
<b>Jason Huang</b>	MPhil, UQ (PT 2015-2018)	Endoscopic ultrasound guided techniques for evaluation of liver disease: direct portal venous pressure gradient measurement and liver biopsy	<b>Benedict Devereaux</b>
Anna Weis	PhD, UQ (2015-2018; submitted)	Investigating the potential of circulating microRNAs as non-invasive biomarkers in cirrhosis and hepatocellular carcinoma	<b>Richard Skoien, Grant Ramm</b>

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

Name	Type of Fellowship	Research Program	University (years)
<b>Ben Devereaux</b>	Associate Professor	Endoscopy	University of Queensland (2013-2018)
<b>Chun How Gan</b>	Endoscopy Fellow	Endoscopy	QHealth
<b>Christopher (Yin Hiew) Kia</b>	Endoscopy Fellow	Endoscopy	QHealth
<b>Kimberley Ryan</b>	Research Co-ordinator	Interventional Gastroenterology	QHealth
<b>Allison Brown</b>	Research Co-ordinator	IBD Clinical Trials, colonoscopy research	QHealth (funded by research)
<b>Ming Han Lim</b>	IBD Clinical Research Fellow	Gut Health Research Group (QIMRB)	QIMRB (2017-2018)
<b>Lauren White</b>	RBWH Scholarship	School of Medicine	UQ/QIMRB (2018-2019)
<b>Abi Marsh</b>	RBWH Scholarship	School of Human Movement and Nutritional Sciences	UQ/QIMRB (2018-2020)
<b>Anthony Croft</b>	RBWH Scholarship	School of Medicine	UQ/QIMRB (2017-2019)
<b>Yoon-Kyo An</b>	Investigator Initiated Study (Janssen)	School of Medicine, School of Medicine	UQ/TRI/QIMRB (2018-2020)
<b>Futoshi Kawamata</b>	Visiting Fellow	Colorectal cancer metastases	Queensland Institute of Medical Research Berghofer (2017-2018)
<b>Vicki Whitehall</b>	Gastroenterological Society of Australia Senior Research Fellowship	Molecular Genetics of Colorectal Cancer	Pathology Queensland (2016-2018)

## 2018 Current RBWH Research Group / Department Led Research Activity

RBWH Research Group/ Department Lead Researchers	Collaborative Researchers	Research Project Title
<b>Mark Appleyard</b>	<b>Florian Grimpén, Jason Hwang, Kimberley Ryan</b>	Does Bowel Preparation Improve Diagnostic Yield in Capsule Endoscopy?
<b>Christopher (Yin Hiew) Kia</b>	<b>Ahmed Abdul Rahman, Jason Hwang</b>	A retrospective audit of endoscopic ultrasound tissue sampling in a large Australian tertiary centre: Cytology vs Histology
<b>Christopher (Yin Hiew) Kia</b>	<b>Benedict Devereaux, Florian Grimpén, Mark Appleyard</b>	A prospective multicentre study of the current ERCP experience in Australia: how are we doing?
<b>Abdulnasser Lafta</b>	<b>Mark Appleyard, Florian Grimpén, Jessica Kinneally, Kimberley Ryan, Matthew Remedios</b>	Two food group elimination diet versus swallowed fluticasone for the management of adult eosinophilic oesophagitis, as a single-centre randomised prospective study
<b>Abdulnasser Lafta</b>	<b>Patrick Walsh</b>	Endoscopic resection and plication for GERD, a prospective study
<b>Florian Grimpén</b>	<b>Joshua Satchwell, Kimberley Ryan, Mark Appleyard</b>	Barrett's Oesophagus and its progression to oesophageal adenocarcinoma – impact of enhanced imaging techniques and endoscopic therapies on outcomes
<b>Kimberley Ryan</b>	<b>Mark Appleyard, Florian Grimpén, Anthony FT Brown</b>	Clinical audit of patients presenting to the ED with upper Gastrointestinal bleeding
<b>Patrick Walsh</b>	<b>Chun How Gan, Mark Appleyard, Jason Huang, George Hopkins</b>	Argon Plasma Coagulation and endoscopic suturing in the management of weight regain after gastric bypass surgery
<b>Jason Huang</b>	<b>Patrick Walsh, Chun How Gan, Daniel Tani, Mark Appleyard, George Hopkins</b>	The Endoscopic Sleeve Gastroplasty – a prospective outcome study
<b>Antonio Lee</b>	<b>Patrick Walsh</b>	Endoscopic removal of eroded gastric band is safe and effective
<b>Richard Skoien</b>	<b>Victoria Grey, Kimberley Ryan, Mark Appleyard, Anthony FT Brown</b>	Examination of health outcomes associated with paracentesis in patients admitted with decompensated cirrhosis
<b>Graham Radford-Smith</b>	Allison Brown (clinical research nurse); Anton Lord (QIMRB); Lisa Simms (QIMRB); Mark Appleyard (SMO); Louisa Gordon (QIMRB); Tom Elliott (QIMRB); Patricia Valery (QIMRB)	Colonoscopy Biomarker Study – optimization of colonoscopy across Queensland
<b>Lauren White</b>	Graham Radford-Smith; Andrew Lee; Anton Lord (QIMRB)	Introduction of Intestinal Ultrasound to a tertiary Gastrointestinal Department



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

RBWH Research Group/ Department Lead Researchers	Collaborative Researchers	Research Project Title
<b>Abigail Marsh</b>	Graham Radford-Smith; Marilyn Banks; Veronique Chachay (UQ); Anton Lord (QIMRB)	The effects of an anti-inflammatory diet on disease activity, symptom severity and microbiota profile in patients with inflammatory bowel disease
<b>Barbara Leggett</b>	Vicki Whitehall, Catherine Bond, Diane McKeone	Molecular Genetics of Colorectal Cancer
<b>Barbara Leggett and Richtard Skoien</b>	Robyn Medcraft, Rita Lawrie, Joanne Mina	Liver Clinical Trials
<b>Richard Skoien, Olivia Cullen, Mary Fenech, Joanne Mina</b>	Alison Kearney, Amy Legg	Quality of Life in Cirrhosis Project (The HepatoCare Pilot)
<b>Richard Skoien, Olivia Cullen, Karen Beckman, Deborah McIntyre</b>	Grant Ramm, Anna Weis	The roles of microRNAs as biomarkers in hepatocellular carcinoma, cirrhosis and decompensated liver disease
<b>Richard Skoien, Victoria Grey, Kimberley Ryan, Mark Appleyard</b>	Anthony Brown	Outcomes of patients at risk of spontaneous bacterial peritonitis admitted to the RBWH with decompensated cirrhosis

## 2018 Collaborative Research Activity involving RBWH Research Group / Department

Collaborative Lead Researchers	RBWH Researchers	Research Project Title
Macrae, F. (Melbourne)	<b>Florian Grimpén, Mark Appleyard</b>	AUSFAP study – the effects of butyrylated high amylose maize starch on polyposis in familial adenomatous polyposis patients
Marie Ooi, Nam Q Nguyen (Royal Adelaide Hospital)	<b>Mark Appleyard, Florian Grimpén, Abdunnasser Lafta, Kimberley Ryan</b>	A randomised controlled study on the effectiveness of a transparent cap-assisted device in the endoscopic management of high-grade food bolus obstruction in the oesophagus
Mangira, D., Moss, A., Nalankilli, K. & Cao, J. (Western Hospital, Footscray)	<b>Florian Grimpén, Mark Appleyard, Matthew Remedios, Kimberley Ryan</b>	Cold snare Polypectomy for non-pedunculated colonic polyps sized 10-19mm: a prospective observational study (CSP study)
Nguyen, N., Phan, A., Schoeman, M. (Royal Adelaide Hospital)	<b>Mark Appleyard, Florian Grimpén, Kimberley Ryan, Anthony FT Brown, Carly Silvester, Arrchanah Balanchandran</b>	The utility of the Glasgow-Blatchford score in predicting clinical outcome and stratifying the needs for therapeutic intervention in hospitalised patients with Upper Gastrointestinal Bleeding
Alan Cripps (Griffith University)	<b>Benedict Devereaux</b>	Mechanisms of mucosal immune regulation in obesity
Yoon-Kyo An (Mater/UQ), Jake Begun (Mater/UQ/TRI)	<b>Graham Radford-Smith</b>	AURORA (Australian Ustekinumab Real-World Observational Research) in Crohn's Disease
Nik Ding (St Vincent's, Melbourne), Edouard Louis (Hopital St Antoine, Liege, Belgium), GETAID IBD Group (Europe)	<b>Graham Radford-Smith, Allison Brown</b>	A prospective randomized controlled trial comparing infliximab-antimetabolites combination therapy to anti-metabolites monotherapy and infliximab monotherapy in Crohn's disease patients in sustained steroid-free remission on combination therapy
Peter De Cruz (Austin Hospital, Melbourne), Ronan Burder (Austin Hospital, Melbourne)	<b>Graham Radford-Smith, Allison Brown</b>	PREDICT UC: Optimizing Infliximab Induction Therapy for Acute Severe Ulcerative Colitis – a randomized controlled trial
Ken Croitura, Mount Sinai Hospital, Toronto, Canada	<b>Graham Radford-Smith, Katherine Hanigan (QIMRB); Lisa Simms (QIMRB)</b>	GEMS (Genes, Environment, Microbiome)
SY Ong, A Nicoll, L Powell, MB Delatycki	<b>R Skoien</b>	Investigating the importance of serum ferritin in the management of HFE Haemochromatosis

## 2018 Research Awards and Achievements

Recipient	Award	Event
Lisa Simms (QIMRB)	Poster of Merit	Digestive Diseases Week, Washington DC, 2018
<b>Graham Radford-Smith</b>	Poster of Merit	Australian Gastroenterology Week, Brisbane, 2018
Anton Lord (QIMRB)	Poster of Merit	Australian Gastroenterology Week, Brisbane, 2018
Martha Zakrzewski (QIMRB)	Winner	GE Society Queensland Young Investigator Awards, Noosa, 2018
Anton Lord (QIMRB)	Finalist	GE Society Queensland Young Investigator Awards, Noosa, 2018
<b>Colonoscopy Biomarker study team</b>	Finalist	Metro North HHS Research Excellence Awards, 2018
<b>Lochlan Fennell</b>	Young Investigator Award	Gastroenterological Society of Queensland Annual Scientific Meeting 2018
<b>Alexandra Kane</b>	Short listed for Young Investigator Award	Australian Gastroenterology Week 2018
<b>Jennifer Borowsky</b>	Trainee Travel Award	American Society for Investigative Pathology 2018

## 2018 Research Grants – Awarded

Investigators <i>(RBWH staff in bold)</i>	RBWH Research Groups/ Departments	Project Title	Granting Body	Amount in 2018	Total Amount <i>(years)</i>
<b>Graham Radford-Smith</b> , Lisa Simms, Anton Lord, <b>Allison Brown</b>	Gut Health Research Group (QIMRB), <b>Gastroenterology Department</b>	Colonoscopy Biomarker Study – optimization of colonoscopy across Queensland	Healthcare Improvement Unit, Queensland Health	\$147,305.23	\$147,305.23 (2018-2019)
<b>Barbara Leggett</b> , <b>Vicki Whitehall</b>	Conjoint Gastroenterology Laboratory	DNA Methylation in sessile serrated adenomas to predict malignant potential	RBWH Research Advisory Committee	\$39,305	\$39,305 (2018)
<b>Richard Skoien</b> , <b>Olivia Cullen</b> , <b>Alison Kearney</b> , <b>Mary Fenech</b> , <b>Amy Legg</b> , <b>Joanne Mina</b>	Department of Gastroenterology and Hepatology, RBWH	Quality of Life in Cirrhosis Project (The HepatoCare Pilot)	RBWH (SEED Initiative Funding)	\$43,115	\$123,750 (2017-2018)

## 2018 Research Publications

### Journal Articles:

- Desomer L, Tate DJ, **Jayanna M**, Pellise M, Awadie H, Burgess NG, McLeod D, Mahajan H, Lee EYT, Williams SJ, Bourke MJ. The clinical significance and synchronous polyp burden of large ( $\geq 20$ mm) sessile serrated polyps in patients without serrated polyposis syndrome. *Endoscopy*. 2018; 50 (11),1080-1088, doi: 10.1055/a-0596-7231. Epub 2018 May 8
- Tate DJ, **Jayanna M**, Awadie H, Desomer L, Lee R, Heitman SJ, Sidhu M, Goodrick K, Burgess NG, Mahajan K, McLeod D, Bourke MJ. A standardized imaging protocol for the endoscopic prediction of dysplasia within sessile serrated polyps (with video). *Gastrointest Endoscopy*. 2018; 87(1), 222-231.e2, doi: 10.1016/j.gie.2017.06.031
- Skekhar A, Hendahewa R, **Jayanna M**, Ratnayake S. Bizarre cause for abdominal pain in a young female. *ANZ J Surg*. 2018;88(10), E739-E740, doi: 10.1111/ans.13707
- Huang JY**. Role of EUS-guided liver biopsy in benign parenchymal disease (with video). *Endosc Ultrasound*. 2018; 7(4), 236-239
- Samarasena JB, **Huang JY**, et al., EUS-guided portal pressure gradient measurement with a simple novel device: a human pilot study. *VideoGIE*. 2018; 3(11), 361-363
- Devereaux B**, Athan E, Brown RR, Greig SM, Jone DM, Bailey FK, Wallis DJ, Singh R. Australian infection control in endoscopy consensus statements on carbapenemase-producing Enterobacteriaceae. *J Gastroenterol Hepatol*. 2018, ISSN:1440-1746, Oct 21
- Wynne K, **Devereaux B**, Dornhorst A. Diabetes of the exocrine pancreas. 2018: Epub, August 27, doi:10.1111/jgh.14451
- Cox AJ, Zhang P, Bowden DW, **Devereaux B**, Davoren PM, Cripps AW, West NP. Enteroendocrine and adipokine associations with type 2 diabetes: phenotypic risk scoring approaches. *J Gastroenterol Hepatol*. 2018

## Journal Articles: (cont):

9. **Clark DA**, Cuda T, **Riddell A**, **Radford-Smith G**, Solomon M. Drain fluid amylase as a sensitive biomarker for the early detection of anastomotic leakage in ileal pouch surgery. *Colorectal Dis.* (2018) Dec 18. [Epub ahead of print]
10. Irwin JR, Ferguson E, Simms LA, Hanigan K, Doecke JD, Langguth D, Arnott A, **Radford-Smith G**. Detectable Laboratory Abnormality Is Present up to 12 Months Prior to Diagnosis in Patients with Crohn's Disease. *Dig Dis Sci.* (2018) Nov 26. [Epub ahead of print]
11. Patrick D, Doecke J, Irwin J, Hanigan K, Simms L, **Howlett M**, **Radford-Smith G**. The effect of pre-admission immunosuppression on colectomy rates in acute severe ulcerative colitis. *Therap Adv Gastroenterol.* (2018) Nov 13;11: eCollection
12. Zakrzewski M, Simms LA, **Brown A**, **Appleyard M**, Irwin J, Waddell N, **Radford-Smith GL**. IL23R-protective coding variant promotes beneficial bacteria and diversity in the ileal microbiome in healthy individuals without inflammatory bowel disease. *J Crohns Colitis.* (2018) Nov 16. doi: 10.1093/ecco-jcc/jjy188. [Epub ahead of print]
13. Duffy DL, Zhu G, Li X, Sanna M, Iles MM, Jacobs LC, Evans DM, Yazar S, Beesley J..., Uitterlinden AG, Madden PA, Heath AC, Nelson EC, Green AC, Chanock S, Barrett JH, Brown MA, Hayward NK, MacGregor S, Sturm RA, Hewitt AW; Melanoma GWAS Consortium (**Radford-Smith**), ..Han J, Martin NG. Novel pleiotropic risk loci for melanoma and nevus density implicate multiple biological pathways. *Nat Commun.* (2018) Nov 14;9(1):4774
14. Zhang T, Choi J, Kovacs MA, Shi J, Xu M; NISC Comparative Sequencing Program; Melanoma Meta-Analysis Consortium, et al. Cell-type-specific eQTL of primary melanocytes facilitates identification of melanoma susceptibility genes. *Genome Res.* (2018) Nov;28(11):1621-1635. Epub 2018 Oct 17
15. Tye H, Yu CH, Simms LA, de Zoete MR, Kim ML, Zakrzewski M, Penington JS, Harapas CR, Souza-Fonseca-Guimaraes F, Wockner LF, Preaudet A, Mielke LA, Wilcox SA, Ogura Y, Corr SC, Kanojia K, Kouremenos KA, De Souza DP, McConville MJ, Flavell RA, Gerlic M, Kile BT, Papenfuss AT, Putoczki TL, **Radford-Smith GL**, Masters SL. NLRP1 restricts butyrate producing commensals to exacerbate inflammatory bowel disease. *Nat Commun.* (2018) Sep 13;9(1):3728
16. MacGregor S, Ong JS, An J, Han X, Zhou T, Siggs OM, Law MH, Souzeau E, Sharma S, Lynn DJ, Beesley J, Sheldrick B, ... Graham SL, Healey PR, White AJR, Casson RJ, Best S, Grigg JR, Goldberg I, Powell JE, Whiteman DC, **Radford-Smith GL**, Martin NG, Montgomery GW, Burdon KP, Mackey DA, Gharahkhani P, Craig JE, Hewitt AW. Genome-wide association study of intraocular pressure uncovers new pathways to glaucoma. *Nat Genet.* (2018) Aug;50(8):1067-1071
17. Momozawa Y, Dmitrieva J, Théâtre E, Defontaine V, ...International IBD Genetics Consortium (**Radford-Smith**), Lathrop M, Hugot JP, Weersma RK, De Vos M, Franchimont D, Vermeire S, Kubo M, Louis E, Georges M. IBD risk loci are enriched in multigenic regulatory modules encompassing putative causative genes. *Nat Commun.* (2018) Jun 21;9(1):2427
18. Roberts RL, Wallace MC, Seinen ML, van Bodegraven AA, Krishnaprasad K, Jones GT, van Rij AM, Baird A, Lawrance IC, Prosser R, Bampton P, Grafton R, Simms LA, Studd C, Bell SJ, Kennedy MA, Halliwell J, Geary RB, **Radford-Smith G**, Andrews JM, McHugh PC, Barclay ML. Nonsynonymous Polymorphism in Guanine Monophosphate Synthetase Is a Risk Factor for Unfavorable Thiopurine Metabolite Ratios in Patients With Inflammatory Bowel Disease. *Inflamm Bowel Dis.* 2018 Nov 29;24(12):2606-2612
19. Entvyio lengthen dose-interval study: lengthening vedolizumab dose interval and the risk of clinical relapse in inflammatory bowel disease. Chan W, Lynch N, Bampton P, Chang J, Chung A, Florin T, Hetzel DJ, Jakobovits S, Moore G, Pavli P, **Radford-Smith G**, Thin L, Baraty B, Haifer C, Yau Y, Leong RWL. *Eur J Gastroenterol Hepatol.* (2018) Jul;30(7):735-740
20. Predicting response after infliximab salvage in acute severe ulcerative colitis. Choy MC, Seah D, Gorelik A, An YK, Chen CY, Macrae FA, Sparrow MP, Connell WR, Moore GT, **Radford-Smith G**, Van Langenberg DR, De Cruz P. *J Gastroenterol Hepatol.* (2018) Jul;33(7):1347-1352
21. Lim MH, Doecke JD, **Radford-Smith GL**. Editorial: first among Equals-not for either infliximab or adalimumab in Crohn's disease-yet. *AlimenPharmacol Ther.* (2018) Apr;47(8):1225-1226
22. Lord AR, Simms LA, **Brown A**, Hanigan K, Krishnaprasad K, Schouten B, **Croft AR**, **Appleyard MN**, **Radford-Smith GL**. Development and evaluation of a risk assessment tool to improve clinical triage accuracy for colonoscopic investigations. *BMC Cancer.* (2018) Feb 27;18(1):229
23. Fricker M, Goggins BJ, Mateer S, Jones B, Kim RY, Gellatly SL, Jarnicki AG, Powell N, Oliver BG, **Radford-Smith G**, Talley NJ, Walker MM, Keely S, Hansbro PM. Chronic cigarette smoke exposure induces systemic hypoxia that drives intestinal dysfunction. *JCI Insight.* (2018) Feb 8;3(3)
24. Wright EK, Kamm MA, De Cruz P, Hamilton AL, Selvaraj F, Princen F, Gorelik A, Liew D, Prïdeaux L, Lawrance IC, Andrews JM, Bampton PA, Jakobovits SL, Florin TH, Gibson PR, Debinski H, Macrae FA, Samuel D, Kronborg I, **Radford-Smith G**, Geary RB, Selby W, Bell SJ, Brown SJ, Connell WR. Anti-TNF Therapeutic Drug Monitoring in Postoperative Crohn's Disease. *J Crohns Colitis.* (2018) May 25;12(6):653-661
25. Roberts G, Perry A, Lord A, Frankland A, Leung V, Holmes-Preston E, Levy F, Lenroot RK, Mitchell PB, Breakspear M. Structural dysconnectivity of key cognitive and emotional hubs in young people at high genetic risk for bipolar disorder. *Mol Psychiatry.* (2018) Feb;23(2):413-421
26. Lord A, Simms L, Hanigan K, Sullivan R, Hobson P, **Radford-Smith GL**. Protective effects of *Helicobacter pylori* for IBD are related to the cagA-positive strain. *Gut* (2018); 67:393-394
27. Kawamata F, Patch A, Nones K, Bond C, McKeone D, Pearson S, Homma S, Liu C, Fennell L, Dumenil T, Hartel G, Kobayasi N, Yokoo H, Fukai M, Nishihara H, Kamiyama T, Burge M, Karapetis C, Taketomi A, **Leggett B**, Waddell N and Whitehall V. Copy number profiles in paired primary and metastatic colorectal cancer, 2017, *Oncotarget* 2018; 9:3394-3405
28. Fennell L, Clendenning M, McKeone D, Jamieson S, Balachandra S, Borowsky J, Liu C, Kawamata F, Bond C, Rosty C, Burge M, Buchanan D, **Leggett B**, Whitehall V. RNF43 is less frequently mutated in Lynch Syndrome compared with sporadic microsatellite unstable colorectal cancers. *Familial Cancer* 2018; 17:63-69
29. Fennell L, Jamieson S, McKeone D, Corish T, Rohdman M, Furner T, Bettington M, Liu C, Kawamata F, Bond C, Van der Pols J, **Leggett B**, Whitehall V. MLH1-93 G/A polymorphism is associated with MLH1 promoter methylation and protein loss in dysplastic sessile serrated adenomas with BRAF V600E mutation. *BMC Cancer* 2018; 18:35 DOI 10.1186/s12885-017-3946-5

## Journal Articles: (cont):

30. Lannagan TRM, Lee YK, Wang T, Roper J, Bettington ML, Fennell L, Vrbanac L, Jonavicius L, Somashekar R, Gieniec K, Yang M, Ng JQ, Suzuki N, Ichinose M, Wright JA, Kobayashi H, Putoczki TL, Hayakawa Y, Leedham S, Abud HE, Yilmaz OH, Marker J, Klebe S, Wirapati P, Tejpar S, **Leggett BA**, Whitehall VLJ, Worthley DL, Woods SL. Genetic editing of colonic organoids provides a molecularly distinct and orthotopic preclinical model of serrated carcinogenesis. *Gut*; Apr 2018, gutjnl-2017-315920; DOI: 10.1136/gutjnl-2017-315920
31. Jenkins MA, Win AK, Templeton AS, Angelakos MS, Buchanan DD, Cotterchio M, Figueiredo JC, Thibodeau SN, Baron JA, Potter JD, Hopper JL, Casey G, Gallinger S, Le Marchand L, Lindor NM, Newcomb PA, Haile RW; Colon Cancer Family Registry Cohort Investigators including **Leggett B**. Cohort Profile: the Colon Cancer Family Registry Cohort (CCFRC). *Int J Epidemiol*. 2018;47(2):387-388
32. Mayo MJ, Wigg AJ, **Leggett BA**, Arnold H, Thompson AJ, Weltman M, Carey EJ, Muir AJ, Ling L, Rossi SJ, DePaoli AM. Engineered FGF19 for the treatment of primary biliary cholangitis: a multicentre, randomized, placebo-controlled trial. *Hepatol Communications* 2018; 2:1037-1050
33. Liu C, Bettington ML, Walker NI, Dwine J, Hartel GF, **Leggett BA**, Whitehall VLJ. CpG Island Methylation in Sessile Serrated Adenomas Increases with Age, Indicating Lower Risk of Malignancy in Young Patients. *Gastroenterology* 2018; 155:1362-1365
34. Roberts SK, Lim R, Strasser S, Nicoll A, Gazzola A, Mitchell J, Siow W, Khoo T, Hamarneh Z, Weltman M, Gow P, Janko N, Tse E, Mishra G, Cheng EH, Levy M, Cheng W, Sood S, **Skoien R**, Mitchell J, Zekry A, George J, MacQuillan G, Wigg A, Stuart K, Sievert W, McCaughan G; ALA Clinical Research Network. Efficacy and Safety of Mycophenolate Mofetil in Patients with Autoimmune Hepatitis and Suboptimal Outcomes After Standard Therapy. *Clin Gastroenterol Hepatol*. 2018 Feb;16(2):268-277.

## Conference Presentations – Invited Speaker, Oral and Poster

### Invited Speaker:

1. **Appleyard M**. Obscure GI bleeding investigation. Australian Gastroenterology Week 2018. Brisbane
2. **Walsh P**. Managing complications of obesity surgery. Australian Gastroenterology Week 2018. Brisbane
3. **Walsh P**. Gastric sleeve overstitch. Australian Gastroenterology Week 2018. Brisbane
4. **Walsh P. RAP: Resection and plication anti-reflux procedure. Bariatric and metabolic endoscopy symposium, September 2018. Sydney**
5. **Walsh P**. Endoscopic revision of Roux en Y gastric bypass. Bariatric and metabolic endoscopy symposium, September 2018. Sydney
6. **Walsh P**. Has the time of the endoscopic surgeon arrived? Lessons learnt in the post bypass population, GESQ Quarterly meeting, September 2018. Brisbane
7. **Tutticci N**. ESD & STER in the upper GI tract. Australian Gastroenterology Week 2018. Brisbane
8. **Huang JY**. Emerging Role of Endohepatology, WCDD, Rome, November 2018
9. **Huang JY**. Role of endoscopic ultrasound in endohepatology, Australian EUS symposium, Adelaide, April 2018
10. **Devereaux, B**. Best practice colonoscopy in Australia in 2018: Item numbers as an instrument of change. Gastroenterology Society of Queensland educational meeting 2018. Brisbane
11. **Devereaux, B**. Are you sure your colonoscopy procedure reaches a standard level? Thai Association for Gastrointestinal Endoscopy (TAGE) Annual Endoscopy Workshop 2018. Bangkok
12. **Devereaux, B**. Colorectal Cancer: Who is at risk? Gastroenterology Association of Thailand/World Gastroenterology Organisation Conference. 2018. Bangkok, Thailand, 2018
13. **Barbara Leggett**. “SSA” Australian Gastroenterology Week 2018, Brisbane.
14. **Barbara Leggett**. “Making it happen: approval for universal tumour testing and what it means for the health care system” Lynch Syndrome Australia Symposium 2018, Garvan Institute of Medical Research, Sydney.
15. **Barbara Leggett**. “Molecular Genetics of Colorectal Tumorigenesis” 9th Asian-Pacific Topic Conference as part of the 104th General Meeting of the Japanese Society of Gastroenterology 2018, Tokyo.
16. **Richard Skoien**. “Biomarkers in HCC”. 2018 ALA Experimental Liver Cancer Workshop; Gallipoli Institute, Greenslopes Hospital, Brisbane.
17. **Richard Skoien**. “Emerging Therapies in NAFLD”. Australian Gastroenterology Week 2018; Brisbane.
18. **Richard Skoien**. “Is inflammation still the key modifiable factor in liver disease progression?” talk. GESA Research Workshop 2018; Gold Coast
19. **Devereaux, B**. Infection Control in Endoscopy Consensus Statements on Carbapenemase-producing Enterobacteriaceae. Gastroenterology Association of Thailand/ World Gastroenterology Organisation Conference. 2018. Bangkok, Thailand
20. **Devereaux, B**. Maximising colonoscopy quality and efficiency. Gastroenterology Association of Thailand/ World Gastroenterology Organisation Conference 2018. Bangkok, Thailand
21. **Devereaux, B**. Approach to solid pancreatic lesions. Gastroenterology Association of Thailand/ World Gastroenterology Organisation Conference 2018. Bangkok, Thailand
22. **Devereaux, B**. GESA Finishing School: Item numbers demystified. Australian Gastroenterology Week 2018. Brisbane
23. **Devereaux, B**. EUS-guided liquid biopsies. GESA EUS Australia 2018. Adelaide
24. **GL Radford-Smith**, invited speaker, “No Guts, No Glory”, Brain Food Breakfast, World Science Festival, Brisbane, March 2018
25. **GL Radford-Smith**. “Inflammatory Bowel Diseases and Irritable Bowel Syndrome – An overview”. Australian Medical Forum, Brisbane, November 2018



### Invited Speaker: (cont):

26. **GL Radford-Smith**. “Biologics in IBD – Timing is everything”. Biosimilars Masterclass, Sydney, August 2018
27. **A Lee**. “Introduction to bowel Ultrasonography”. Theory and Hands on Workshop. International Bowel Ultrasound Group. Royal Melbourne Hospital, Melbourne, Australia, November 2018
28. **A Lee**. “Establishing an intestinal ultrasound service”. International Bowel Ultrasound Group. Royal Melbourne Hospital, Melbourne, Australia, November 2018.

### Oral Presentations:

1. Samarasena J, Han JY, Patel A, Fortinsky KJ, Shimizu T, Hu K, **Huang JY**, Chang KC. EUS-Guided portal pressure gradient measurement: a single center experience. DDW, Washington, June 2018
2. **Lim MH**, Lord A, Simms LA, Hanigan K, Edmundson A, Rickard M, Stitz R, Clark D, Radford-Smith GL. Have changes in medical therapy and surgical techniques for ulcerative colitis altered post colectomy outcomes over the past 26 years? Australian Gastroenterology Week 2018, Brisbane
3. Zakrzewski M, Simms LA, **Brown A, Appleyard MN**, Irwin J, **Radford-Smith GL**. IL23R (Interleukin 23 Receptor) R381Q Gene Variant Impacts the Microbial Composition in Non-IBD Healthy Controls. Australian Society for Microbiology, 2018, Brisbane
4. Lord A, Baird A, Simms LA, Krishnaprasad K, Hanigan K, Doecke JD, Bampton PA, Andrews JM, Gearry RB, **Radford-Smith GL**, Lawrance IC. Crohn's Disease Patients with at least one NOD2 Mutation and Who Smoke Regularly are Four Times as Likely to Need Two or more Resections. Australian Gastroenterology Week 2018, Brisbane.

### Poster Presentations:

1. Anton Lord A, Angela Baird A, Lisa Simms LA, Krupa Krishnaprasad K, Katherine Hanigan K, James D. Doecke JD, Richard Gearry R, Peter A. Bampton PA, **Radford-Smith GL**, et al. Crohn's Disease Patients with at least one NOD2 Mutation and Who Smoke Regularly are Four Times as Likely to Need two or more Resections. Gastroenterology, Vol. 154, Issue 6, S-629–S-630. Digestive Diseases Week, Washington DC, June 2018
2. Choy MC, Seah D, Faleck D, Shah S, Al Khoury A, An YK, **Radford-Smith GL**, Bessissow T, et al. Salvage Therapy in Acute Severe Ulcerative Colitis: a Systematic Review and Meta-Analysis. Gastroenterology, Vol. 154, Issue 6, S-840. Digestive Diseases Week, Washington DC, June 2018
3. Pulusu SSR, Srinivasan A, Krishnaprasad K, Cheng D, Mogilevski T, Flanagan E, Keung C, Wu Y, **Radford GL**, et al. Vedolizumab (VDZ) Real World Outcomes in Ulcerative Colitis (UC). Gastroenterology, Vol. 154, Issue 6, S-836. Digestive Diseases Week, Washington DC, June 2018
4. Weis A, Marquart L, Calvopina D, Genz B, Ramm GA, **Skoien R**. A Novel Diagnostic Serum microRNA Biomarker Panel for Hepatocellular Carcinoma in Hepatitis C. The Liver Meeting (AASLD) 2018; San Francisco, USA
5. Ong SY, Worland T, Pateria P, Powell L, Gurrin L, Ramm L, Testro A, Olynyk J, Ramm G, Anderson G, Skoien R, Delatycki M, Nicoll AJ. The relationship between serum ferritin and markers of liver fibrosis in a hemochromatosis cohort. Australian Gastroenterology Week 2018; Brisbane, Australia.

## Department of Infectious Diseases Unit

In 2018, The RBWH Infectious Diseases Unit continued to produce international-standard, practice-changing clinical and translational research in partnership with the University of Queensland Centre for Clinical Research (UQCCR), Queensland Institute for Medical Research – Berghofer (QIMR-B) and other collaborators.

The international MERINO trial, co-ordinated in Brisbane by UQCCR, examined different antibiotic strategies for common drug-resistant bacterial infections. It was published in the Journal of the American Medical Association and has since had over 90 000-page views. The Infectious Diseases Society of America voted it as the trial most likely to change clinical practice in 2018. By applying the results of this study, it is estimated that more than 10,000 lives could be saved worldwide each year.

Professor Paterson and UQCCR continued to produce a large amount of other very high quality and highly-sited clinical infectious diseases research and are leading several new clinical trials of anti-infectives.

Professor McCarthy and his group at (QIMR-B) continued to publish critically important research addressing drug therapy for malaria and other parasitic infections. Professor McCarthy's contribution to Australian science was acknowledged with the award of Fellowship of the Australian Academy of Health and Medical Sciences.

Dr Kate McCarthy was awarded her PhD for "*Pseudomonas aeruginosa* blood stream infections: clinical and molecular epidemiology, virulence and outcome."

Drs Redmond, Wright, Chapman and Hajkowicz had a number of publications accepted and presented at international and national conferences.

### 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)
Paul Griffin	PhD UQ (2013-)	Human challenge studies in malaria	<b>James McCarthy</b> , David Looke
John Woodford	PhD UQ (2016-)	Microcirculatory disturbance in malaria	<b>James McCarthy</b> , Nick Anstey
<b>Anand Odedra</b>	PhD University of Liverpool (2017-)	Transmission of Malaria	<b>James McCarthy</b> , David Lalloo
<b>Paul Chapman</b>	PhD UQ (2017-)	A radiation-attenuated hookworm vaccine	<b>James McCarthy</b> , Alex Loukas
<b>Dr Kate McCarthy</b>	PhD, UQ (2014-2018)	<i>Pseudomonas aeruginosa</i> blood stream infections: Clinical and molecular epidemiology, virulence and outcome	<b>David Paterson</b>
<b>Dr Hugh Wright</b>	PhD, UQ (2017 -		David Paterson
Dr Patrick Harris	PhD, UQ (completed 2018)		<b>David Paterson</b>
Dr Andrew Henderson	PhD		<b>David Paterson</b>
Dr John McNamara	PhD		<b>David Paterson</b>
Dr Sanmarie Schlebusch	PhD		<b>David Paterson</b>

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

Name	Type of Fellowship	Research Program	University (years)
<b>James McCarthy</b>	NHMRC Practitioner Fellow	QIMR Berghofer	QIMR Berghofer (2002-current)
<b>Anand Odedra</b>	Medicines for Malaria	QIMR Berghofer	University of Liverpool (2017-)
Bridget Barber	NHMRC ECF	QIMR Berghofer	Menzies School of Health and Research

## 2018 Current RBWH Research Group / Department Led Research Activity

RBWH Research Group/Department Lead Researchers	Collaborative Researchers	Research Project Title
James McCarthy	Medicines for Malaria/multiple Pharma/Bill and Melinda Gates Foundation	Human Challenge Studies in malaria
James McCarthy	<b>Paul Thomas</b> (Nuclear Medicine)	In vivo imaging in malaria
James McCarthy	Robert Sauerwein (Netherlands)	Transmission studies in malaria
James McCarthy	Michael Good, Don McManus, Istvan Toth, Nicholas Anstey, Denise Doolan, Christian Engwerda, Alexander Loukas, Richard Price	Tropical diseases: translating discoveries into better health
James McCarthy	Gonzalo Domingo (PATH)	Biomarkers for Malaria Elimination
James McCarthy	Merck; Wellcome Trust	MK5717

## 2018 Collaborative Research Activity involving RBWH Research Group / Department

Collaborative Lead Researchers	RBWH Researchers	Research Project Title
Tiffany Harris-Brown, Anna Donaldson, Kyra Cottrell, Michelle Bauer, Dr Delaney Burnard, Susan Moss, A/Prof Mark Butler	<b>Professor David Paterson</b>	UQCCR Antibiotic Resistance – Paterson Group
Luke Coffey (QPP), Prof Charles Gilks (UQ)	<b>Dr Andrew Redmond</b>	Taking the Lead: Peer Delivery of Point of Care Testing for STI within a Community Setting
Dr Nina Hall, Professor Paul Memmott (UQ)	<b>Dr Andrew Redmond</b>	Housing and health: do housing repairs and maintenance improve community health?
Dr Patrick Harris, A/Prof Scott Beatson, Dr Brian Forde	<b>Professor David Paterson, Dr Krispin Hajkowicz, Ms Michelle Doidge, Ms Trish Hurst</b>	Queensland Genomic Health Alliance Microbiology Demonstration Project
A/Prof Lachlan Coin (UQ), Dr Seweryn Bialasiewicz (QPID), Dr Mark Blaskovich (UQ)	<b>Dr Krispin Hajkowicz, Dr Marion Woods, A/Prof Glen Kennedy</b>	Rapid detection of antibiotic resistant bacterial infection in patients with suspected sepsis
<b>James McCarthy</b> , John Woodford	<b>Paul Thomas</b>	In vivo images in malaria
<b>James McCarthy</b> , Anand Odedra	<b>Glen</b>	Apheresis in malaria

## 2018 Research Awards and Achievements

Recipient	Award	Event
<b>James McCarthy</b>	Fellow	Australian Academy of Health and Medical Sciences

## 2018 Research Grants – Awarded

Investigators (RBWH staff in bold)	RBWH Research Groups/Departments	Project Title	Granting Body	Amount in 2018	Total Amount (years)
<b>Kate McCarthy</b>	Infectious Diseases Unit	Coalface Diabetic Foot Infection Study	RBWH Foundation	\$15,000	\$15,000 (2018)
<b>Krispin Hajkowicz</b> , David Whiley	Infectious Diseases Unit, Intensive Care Unit	Rapid detection of resistance genes from gram-negative bacteria isolated from blood in ICU-admitted patients	RBWH Foundation	\$40,000	\$40,000 (2018)
<b>David Paterson</b> , Sharon Lewin, Tania Sorrell, J McVernon, S Webb, J Kaldor, R Andrews, Allen Cheng and others	Infectious Diseases Unit	Australian Partnership (for) Preparedness Research on Infectious (disease) Emergencies (APPRISE) (NHMRC CRE administered by the University of Melbourne)	University of Melbourne	\$27,500	
Mark Blaskovich, Matthew Cooper, Karl Hansford, <b>Jason Roberts</b> and <b>David Paterson</b>	Infectious Diseases Unit, Intensive Care Unit	Lipopeptide antibiotics for XDR Gram-negative infections	NHMRC Development Grant		\$994,897 (2018-2020)

## 2018 Research Grants – Awarded (cont)

Investigators ( <i>RBWH staff in bold</i> )	RBWH Research Groups/Departments	Project Title	Granting Body	Amount in 2018	Total Amount (years)
<b>David Paterson</b> , Sharon Chen, Tony Korman and Jenny Kok	Infectious Diseases Unit	Clostridium difficile Infections: burden, clinical practice and health outcomes in five large tertiary hospitals in Eastern Australia	Western Sydney Local Health District	\$44,000	\$44,000 (2018)
<b>David Paterson</b> , Andrew Henderson and Patrick Harris	Infectious Diseases Unit	Pilot Randomised Controlled Trial of Penicillin versus Flucloxacillin for Definitive Treatment of Invasive Penicillin susceptible Staphylococcus aureus	Metro North Hospital and Health Service	44,000	\$44,000 (2018)
<b>David Paterson</b> , Patrick Harris, Andrew Henderson and <b>Jason Roberts</b>	Infectious Diseases Unit	Rapid characterisation of pathogens for personalised antimicrobial selection in critically ill patients	Metro North Hospital and Health Service	\$44,000	\$44,000 (2018)
<b>David Paterson</b> , Len Gray, Mark Schembri, Ruth Hubbard, Christopher Freeman, Elaine Pascoe, Patrick Harris, Nancy Peel, <b>Krispin Hajkowicz</b> and others	Infectious Diseases Unit	Cluster randomised trial of a multimodal intervention to reduce antimicrobial use in residential aged care facilities	NHMRC MRFF – Antimicrobial Resistance Targeted Call for Research		\$1,199,976 (2018-2023)
<b>James McCarthy</b>	Infectious Diseases	Centre for Research Excellence in Malaria Elimination	NHMRC	\$500,315.30	\$2,470,291.30 (2017-2022)
<b>James McCarthy</b>	Infectious Diseases	T-follicular helper cell subsets that induce protective anti-Plasmodium falciparum antibodies	NHMRC	\$152,087.16	\$456,261.50 (2017-2019)
<b>James McCarthy</b>		NHMRC Practitioner Fellowship GNT1135955 Project: Translational Studies in Malaria	NHMRC	\$100,331.85	\$507,679.17 (2018-2022)
<b>James McCarthy</b> , Nicholas Anstey, Denise Doolan, Christian Engwerda, Michael Good, Alex Loukas, Don McManus, Richard Price, Istvan Toth	Infectious Diseases	NHMRC Program Grant GNT1132975 Project: Tropical diseases: translating discoveries into better health	NHMRC	\$4,016,182.25 (Total) \$446,245.21 (McCarthy share)	\$20,321,882.17 (Total) \$2,258,000.81 (McCarthy share) (2018-2022)

## 2018 Research Publications

### Journal Articles

- Avent ML**, Rogers BA, Cheng AC, Athan E, Francis JR, Roberts MJ, **Paterson DL**, Harris PNA. Fosfomycin: what was old is new again. Intern Med J. 2018 Dec;48(12):1425-1429
- Shen C, Feng S, Chen H, Dai M, **Paterson DL**, Zheng X, Wu X, Zhong LL, Liu Y, Xia Y, Ma R, Huang X, Tian GB. Transmission of mcr-1-Producing Multidrug-resistant Enterobacteriaceae in Public Transportation in Guangzhou, China. Clin Infect Dis. 2018 Nov 13;67(suppl\_2): S217-S22
- Henderson A, Tan E, **McCarthy KL**, **Paterson DL**. Activity of ceftolozane/tazobactam against a collection of Pseudomonas aeruginosa isolates from bloodstream infections in Australia. Pathology. 2018 Dec;50(7):748-752
- Evans SR, Follmann D, Liu Y, Holland T, Doernberg SB, Rouphael N, Hamasaki T, Jiang Y, Lok JJ, Tran TTT, Harris AD, Fowler VG Jr, Boucher H, Kreiswirth BN, Bonomo RA, van Duin D, **Paterson DL**, Chambers H. Sequential Multiple Assignment Randomized Trials for Comparing Personalized Antibiotic Strategies. (SMART-COMPASS). Clin Infect Dis. 2018 Oct 23. doi: 10.1093/cid/ciy912. [Epubahead of print] PubMed PMID: 30351426
- Isler B, Doi Y, Bonomo RA, **Paterson DL**. New Treatment Options against Carbapenem-Resistant Acinetobacter baumannii Infections. Antimicrob Agents Chemother. 2018 Dec 21;63(1). pii: e01110-18. doi: 10.1128/AAC.01110-18. Print 2019 Jan. Review
- Forde BM, Zowawi HM, Harris PNA, Roberts L, Ibrahim E, Shaikh N, Deshmukh A, Sid Ahmed MA, Al Maslamani M, Cottrell K, Trembizki E, Sundac L, Yu HH, Li J, Schembri MA, Whiley DM, **Paterson DL**, Beatson SA. Discovery of mcr-1-Mediated Colistin Resistance in a Highly Virulent Escherichia coli Lineage. mSphere. 2018 Oct 10;3(5). pii: e00486-18



### Journal articles: (cont):

7. Harris PNA, Tambyah PA, Lye DC, Mo Y, Lee TH, Yilmaz M, Alenazi TH, Arabi Y, Falcone M, Bassetti M, Righi E, Rogers BA, Kanj S, Bhally H, Iredell J, Mendelson M, Boyles TH, Looke D, Miyakis S, Walls G, Al Khamis M, Zikri A, Crowe A, Ingram P, Daneman N, Griffin P, Athan E, Lorenc P, Baker P, Roberts L, Beatson SA, Peleg AY, Harris-Brown T, **Paterson DL**; MERINO Trial Investigators and the Australasian Society for Infectious Disease Clinical Research Network (ASID-CRN). Effect of Piperacillin-Tazobactam vs Meropenem on 30-Day Mortality for Patients with E coli or Klebsiella pneumoniae Bloodstream Infection and Ceftriaxone Resistance: A Randomized Clinical Trial. *JAMA*. 2018 Sep 11;320(10):984-994
8. Xu Y, Zhong LL, Srinivas S, Sun J, Huang M, **Paterson DL**, Lei S, Lin J, Li X, Tang Z, Feng S, Shen C, Tian GB, Feng Y. Spread of MCR-3 Colistin Resistance in China: An Epidemiological, Genomic and Mechanistic Study. *EBioMedicine*. 2018 Aug; 34:139-157
9. Russo A, Falcone M, Gutiérrez-Gutiérrez B, Calbo E, Almirante B, Viale PL, Oliver A, Ruiz-Garbajosa P, Gasch O, Gozalo M, Pitout J, Akova M, Peña C, Cisneros JM, Hernández-Torres A, Farcomeni A, Prim N, Origüen J, Bou G, Tacconelli E, Tumbarello M, Hamprecht A, Karaiskos I, de la Calle C, Pérez F, Schwaber MJ, Bermejo J, Lowman W, Hsueh PR, Mora-Rillo M, Rodríguez-Gomez J, Souli M, Bonomo RA, **Paterson DL**, Carmeli Y, Pascual A, Rodríguez-Baño J, Venditti M; REIPI/ESGBIS/INCREMENT investigators. Predictors of outcome in patients with severe sepsis or septic shock due to extended-spectrum  $\beta$ -lactamase-producing Enterobacteriaceae. *Int J Antimicrob Agents*. 2018 Nov;52(5):577-585
10. McNamara JF, Righi E, **Wright H**, Hartel GF, Harris PNA, **Paterson DL**. Long-term morbidity and mortality following bloodstream infection: a systematic literature review. *J Infect*. 2018 Jul;77(1):1-8
11. Zowawi HM, Syrmis MW, Kidd TJ, Balkhy HH, Walsh TR, Al Johani SM, Al Jindan RY, Alfaresi M, Ibrahim E, Al-Jardani A, Al Salman J, Dashti AA, Sidjabat HE, Baz O, Trembizki E, Whiley DM, **Paterson DL**. Identification of carbapenem-resistant *Pseudomonas aeruginosa* in selected hospitals of the Gulf Cooperation Council States: dominance of high-risk clones in the region. *J Med Microbiol*. 2018 Apr 17
12. **McCarthy KL**, Wailan AM, Jennison AV, Kidd TJ, **Paterson DL**. *P. aeruginosa* blood stream infection isolates: A "full house" of virulence genes in isolates associated with rapid patient death and patient survival. *Microb Pathog*. 2018 Jun; 119:81-85
13. Scheuerman O, Schechner V, Carmeli Y, Gutiérrez-Gutiérrez B, Calbo E, Almirante B, Viale PL, Oliver A, Ruiz-Garbajosa P, Gasch O, Gozalo M, Pitout J, Akova M, Peña C, Molina J, Hernández-Torres A, Venditti M, Prim N, Origüen J, Bou, G, Tacconelli E, Tumbarello M, Hamprecht A, Karaiskos I, de la Calle C, Pérez F, Schwaber MJ, Bermejo J, Lowman W, Hsueh PR, Navarro-San Francisco C, Bonomo RA, **Paterson DL**, Pascual A, Rodríguez-Baño J; REIPI/ESGBIS/INCREMENT investigators. Comparison of Predictors and Mortality Between Bloodstream Infections Caused by ESBL-Producing *Escherichia coli* and ESBL-Producing *Klebsiella pneumoniae*. *Infect Control Hosp Epidemiol*. 2018 Jun;39(6):660-667
14. Mitchell BG, White N, Farrington A, Allen M, Page K, Gardner A, Halton K, Riley TV, Gericke CA, **Paterson DL**, Graves N, Hall L. Changes in knowledge and attitudes of hospital environmental services staff: The Researching Effective Approaches to Cleaning in Hospitals (REACH) study. *Am J Infect Control*. 2018 Sep;46(9):980-985
15. Avery RK, Silveira FP, Benedict K, Cleveland AA, Kauffman CA, Schuster MG, Dubberke ER, Husain S, **Paterson DL**, Chiller T, Pappas P. Cytomegalovirus infections in lung and hematopoietic cell transplant recipients in the Organ Transplant Infection Prevention and Detection Study: a multi-year, multicentre prospective cohort study. *Transpl Infect Dis*. 2018 Jun;20(3): e12877
16. Sidjabat HE, Gien J, Kvaskoff D, Ashman K, Vaswani K, Reed S, McGeary RP, **Paterson DL**, Bordin A, Schenk G. The use of SWATH to analyse the dynamic changes of bacterial proteome of carbapenemase-producing *Escherichia coli* under antibiotic pressure. *Sci Rep*. 2018 Mar 1;8(1):3871
17. Yadav R, Rogers KE, Bergen PJ, Bulitta JB, Kirkpatrick CMJ, Wallis SC, **Paterson DL**, Nation RL, Lipman J, **Roberts JA**, Landersdorfer CB. Optimization and Evaluation of Piperacillin-Tobramycin Combination Dosage Regimens against *Pseudomonas aeruginosa* for Patients with Altered Pharmacokinetics via the Hollow-Fiber Infection Model and Mechanism-Based Modeling. *Antimicrob Agents Chemother*. 2018 Apr 26;62(5). pii: e00078-18
18. Bergen PJ, Bulitta JB, Sime FB, **Lipman J**, McGregor MJ, Millen N, **Paterson DL**, Kirkpatrick CMJ, **Roberts JA**, Landersdorfer CB. Differences in suppression of regrowth and resistance despite similar initial bacterial killing for meropenem and piperacillin/tazobactam against *Pseudomonas aeruginosa* and *Escherichia coli*. *Diagn Microbiol Infect Dis*. 2018 May;91(1):69-76
19. Blaskovich MAT, Hansford KA, Gong Y, Butler MS, Muldoon C, Huang JX, Ramu S, Silva AB, Cheng M, Kavanagh AM, Ziora Z, Premraj R, Lindahl F, Bradford TA, Lee JC, Karoli T, Pellingon R, Edwards DJ, Amado M, Elliott AG, Phetsang W, Daud NH, Deecker JE, Sidjabat HE, Ramaolaga S, Zuegg J, Betley JR, Beevers APG, Smith RAG, **Roberts JA**, **Paterson DL**, Cooper MA. Protein-inspired antibiotics active against vancomycin- and daptomycin-resistant bacteria. *Nat Commun*. 2018 Jan 2;9(1):22
20. Tacconelli E, Carrara E, Savoldi A, Harbarth S, Mendelson M, Monnet DL, Pulcini C, Kahlmeter G, Kluytmans J, Carmeli Y, Ouellette M, Outterson K, Patel, J, Cavalieri M, Cox EM, Houchens CR, Grayson ML, Hansen P, Singh N, Theuretzbacher U, Magrini N; WHO Pathogens Priority List Working Group. Discovery, research, and development of new antibiotics: the WHO priority list of antibiotic-resistant bacteria and tuberculosis. *Lancet Infect Dis*. 2018 Mar;18(3):318-327
21. **McCarthy KL**, Cherian JD, **Avent ML**, **Paterson DL**. Combination antibiotic therapy for *Pseudomonas aeruginosa* bacteremia in febrile neutropenic patients? The question still remains. *Infect Dis (Lond)*. 2018 May;50(5):403-406
22. Djoko KY, Achard MES, Phan MD, Lo AW, Miraula M, Prombhul S, Hancock SJ, Peters KM, Sidjabat HE, Harris PN, Miti N, Walsh TR, Anderson GJ, Shafer WM, **Paterson DL**, Schenk G, McEwan AG, Schembri MA. Copper Ions and Coordination Complexes as Novel Carbapenem Adjuvants. *Antimicrob Agents Chemother*. 2018 Jan 25;62(2). pii: e02280-17
23. van Duin D, Lok JJ, Earley M, Cober E, Richter SS, Perez F, Salata RA, Kalayjian RC, Watkins RR, Doi Y, Kaye KS, Fowler VG Jr, **Paterson DL**, Bonomo RA, Evans S; Antibacterial Resistance Leadership Group. Colistin Versus Ceftazidime-Avibactam in the Treatment of Infections Due to Carbapenem-Resistant Enterobacteriaceae. *Clin Infect Dis*. 2018 Jan 6;66(2):163-171
24. Tattersall T, **Wright H**, **Redmond A**. Meropenem-induced liver injury and beta-lactam cross-reactivity. *BMJ Case Rep*. (2018) 11(1) e227124
25. **Coghill S**, McNamara J, **Woods M**, **Hajkovicz K**. Epidemiology and clinical outcomes of hepatitis delta (D) virus infection in Queensland, Australia. *Int J Infect Dis*. 2018 Sep; 74:123-127
26. **Stewart A**, **Hajkovicz K**. Heterogeneity in skin manifestations of spotted fever group rickettsial infection in Australia. *Australas J Dermatol*. 2018 Nov;59(4):349-351

### Journal articles: (cont):

27. **Stewart A, Roberts JA**, Wallis SC, **Allworth AM, Legg A, McCarthy KL**. Evidence of clinical response and stability of Ceftolozane/Tazobactam used to treat a carbapenem-resistant *Pseudomonas Aeruginosa* lung abscess on an outpatient antimicrobial program. *Int J Antimicrob Agents*. 2018 Jun;51(6):941-942
28. **Armstrong MR, McCarthy KL**, Horvath RL. A contemporary 16-year review of *Coxiella burnetii* infective endocarditis in a tertiary cardiac center in Queensland, Australia. *Infect Dis (Lond)*. 2018 Jul;50(7):531-538
29. **Chew R, Woods ML**. Epidemiology of fungal keratitis in Queensland, Australia. *Clin Exp Ophthalmol*. 2018 Jun 21. doi: 10.1111/ceo.13346. [Epub ahead of print]
30. **Clarke NE, Clements, ACA, Amaral S, Richardson A, McCarthy JS, McGown J, Bryan S, Gray DJ, Nery SV**. (S)WASH-D for Worms: a pilot study investigating the differential impact of school- versus community-based integrated control programs for soil-transmitted helminths. *PLoS Negl Trop Dis* 2018 12(5): e0006389
31. **Collins KA, Wang CY, Adams M, Mitchell H, Rampton M, Elliott S, Reuling JJ, Bousema T, Sauerwein R, Chalons S, Mohrle JJ, McCarthy JS**. a controlled human malaria infection model enabling evaluation of transmission-blocking interventions. *J Clin Invest* 2018 128(4): 1551-1562
32. **Edwards CL, Ng SS, Corvino D, Montes de Oca M, Rivera FL, Nones K, Lakis V, Waddell N, Amante FH, McCarthy JS, Engwerda CR**. Early changes in CD4+ T cell activation following blood-stage *Plasmodium falciparum* infection. 2018 *J Infect Dis*
33. **Feng, G, Boyle MJ, Cross N, Chan JA, Reiling L, Osier F, Stanisic DI, Mueller I, Anders RF, McCarthy JS, Richards JS, Beeson JG**. Human Immunization with a Polymorphic Malaria Vaccine Candidate Induced Antibodies to Conserved Epitopes That Promote Functional Antibodies to Multiple Parasite Strains. 2018 *J Infect Dis* 218(1): 35-43
34. **Khoury DS, Aogo R, Randrianomezantsoa-Radohery G, McCaw JM, Simpson JA, McCarthy JS, Haque A, Cromer D, Davenport MP**. Within-host modeling of blood-stage malaria. 2018 *Immunol Rev* 285(1): 168-193
35. **Vaz Nery S, Qi J, Llewellyn S, Clarke NE, Traub R, Gray DJ, Vallely AJ, Williams GM, Andrews RM, McCarthy JS, Clements ACA**. Use of quantitative PCR to assess the efficacy of albendazole against *Necator americanus* and *Ascaris* spp. in Manufahi District, Timor-Leste. 2018 *Parasit Vectors* 11(1): 373
36. **Wang CYT, McCarthy JS, Stone WJ, Bousema T, Collins KA, Bialasiewicz S**. Assessing *Plasmodium falciparum* transmission in mosquito-feeding assays using quantitative PCR. 2018 *Malar J* 17(1): 249
37. **Woodford J, Shanks GD, Griffin P, Chalons S, McCarthy JS**. The Dynamics of Liver Function Test Abnormalities after Malaria Infection: a Retrospective Observational Study. 2018 *Am J Trop Med Hyg* 98(4): 1113-1119
38. **Clarke NE, Llewellyn S, Traub RJ, McCarthy JS, Richardson A, Nery SV**. Quantitative Polymerase Chain Reaction for Diagnosis of Soil-Transmitted Helminth Infections: A Comparison with a Flotation-Based Technique and an Investigation of Variability in DNA Detection. 2018 *Am J Trop Med Hyg*
39. **Reuling JJ, van de Schans LA, Coffeng LE, Lanke K, Meerstein-Kessel L, Graumans W, van Gemert GJ, Teelen K, Siebelink-Stoter R, van de Vegte-Bolmer M, de Mast Q, van der Ven AJ, Ivinson K, Hermsen CC, de Vlas S, Bradley J, Collins KA, Ockenhouse CF, McCarthy J, Sauerwein RW, Bousema T**. A randomized feasibility trial comparing four antimalarial drug regimens to induce *Plasmodium falciparum* gametocytemia in the controlled human malaria infection model. *Elife*. 2018 Feb 27;7
40. **Ng SS, Souza-Fonseca-Guimaraes F, Rivera FL, Amante FH, Kumar R, Gao Y, Sheel M, Beattie L, Montes de Oca M, Guillerey C, Edwards CL, Faleiro RJ, Frame T, Bunn PT, Vivier E, Godfrey DI, Pellucci DG, Lopez JA, Andrews KT, Huntington ND, Smyth MJ, McCarthy J, Engwerda CR**. Rapid loss of group 1 innate lymphoid cells during blood stage *Plasmodium* infection. *Clin Transl Immunology*. 2018;7(1): e1003
41. **Andrews KA, Wesche D, McCarthy J, Mohrle JJ, Tarning J, Phillips L, Kern S, Grasela T**. Model-Informed Drug Development for Malaria Therapeutics. *Annu Rev Pharmacol Toxicol*. 2018 Jan 6; 58:567-582
42. **Stanisic DI, McCarthy JS, Good MF**. Controlled Human Malaria Infection: Applications, Advances, and Challenges. *Infect Immun*. 2018 Jan;86(1)
43. **Sekuloski S, Batzloff MR, Griffin P, Parsonage W, Elliott S, Hartas J, O'Rourke P, Marquart L, Pandey M, Rubin FA, Carapetis J, McCarthy J, Good MF**. Evaluation of safety and immunogenicity of a group A streptococcus vaccine candidate (MJ8VAX) in a randomized clinical trial. *PLoS One*. 2018;13(7):e0198658
44. **Pawliw R, Farrow R, Sekuloski S, Jennings H, Healer J, Phuong T, Sathe P, Pasay C, Evans K, Cowman AF, Schofield L, Chen N, McCarthy J, Trenholme K**. A bioreactor system for the manufacture of a genetically modified *Plasmodium falciparum* blood stage malaria cell bank for use in a clinical trial. *Malar J*. 2018 Aug 6;17(1):283
45. **Loughland JR, Woodberry T, Boyle MJ, Tipping PE, Piera KA, Amante FH, Kenangalem E, Price RN, Engwerda CR, Anstey NM, McCarthy JS, Minigo G**. *Plasmodium falciparum* activates CD16+ dendritic cells to produce TNF and IL-10 in subpatent malaria. *J Infect Dis*. 2018 Sep 15
46. **Berna AZ, McCarthy JS, Wang XR, Michie M, Bravo FG, Cassells J, Trowell SC**. Diurnal variation in expired breath volatiles in malaria-infected and healthy volunteers. *J Breath Res*. 2018 Sep 19;12(4):046014
47. **Leow CH, Fischer K, Leow CY, Braet K, Cheng Q, McCarthy J**. Isolation and characterization of malaria PfHRP2 specific VNAR antibody fragments from immunized shark phage display library. *Malar J*. 2018 Oct 24;17(1):383
48. **McCarthy JS, Smith B, Reid M, Berman J, Marquart L, Dobbin C, West L, Read LT, Dow G**. Blood schizonticidal activity and safety of tafenoquine when administered as chemoprophylaxis to healthy, non-immune participants followed by blood stage *Plasmodium falciparum* challenge: a randomized, double-blinded, placebo-controlled Phase 1b study. *Clin Infect Dis*. 2018 Nov 1
49. **Hii SF, Senevirathna D, Llewellyn S, Inpankaew T, Odermatt P, Khieu V, Muth S, McCarthy J, Traub RJ**. Development and Evaluation of a Multiplex Quantitative Real-Time Polymerase Chain Reaction for Hookworm Species in Human Stool. *Am J Trop Med Hyg*. 2018 Nov;99(5):1186-1193. doi: 10.4269/ajtmh.18-0276
50. **Shriemer K, Bobogare A, Ley B, McCarthy J, Price RN et al**. Quantifying primaquine effectiveness and improving adherence: a round table discussion of the AP MEN Vivax Working Group. *Malar J*. 2018 Jun 20;17(1):241. doi: 10.1186/s12936-018-2380-8
51. **Vickers ML, Dulhunty JM, Ballard E, Chapman P, Muller M, Roberts JA, Cotta MO**. Risk factors for multidrug-resistant Gram-negative infection in burn patients. *ANZ J Surg*. 2018 May;88(5):480-485.

## 2018 Conference Presentations– Invited Speaker, Oral and Poster

### Invited Speaker:

1. Microbial Genomics – A Case Study. Australasian College for Infection Prevention and Control Annual Scientific Meeting, Brisbane, November 2018
2. **Krispin Hajkowicz** - Surgical Prophylaxis – The Evidence or Lack Thereof. Australian Society for Antimicrobials Annual Scientific Meeting, Brisbane, February 2018
3. **Krispin Hajkowicz** – Metagenomic Sequencing. Australian national antimicrobial resistance and stewardship forum, Melbourne, November 2018
4. **Stewart A, Roberts JA, Wallis SC, Allworth AM, Legg A, McCarthy KL.** Evidence of clinical response and stability of Ceftolozane/Tazobactam used to treat a carbapenem-resistant *Pseudomonas Aeruginosa* lung abscess on an outpatient antimicrobial program. Australian Society for Antimicrobials Annual Scientific Meeting, Brisbane, February 2018
5. **James McCarthy** – exploiting new understanding of the stage transition of *Plasmodium* to develop a model able to interrogate transmission, American Society of Tropical Medicine and Hygiene (ASTMH) 67<sup>th</sup> Annual Meeting, November 2018, New Orleans
6. **James McCarthy** – the induced blood stage malaria model: a tool to accelerate the development of new interventions against malaria. Joint International Tropical Medicine Meeting (JITMM), January 2018, Bangkok
7. **James McCarthy** – translational tools for Early Development of Antimalarials: the Human Malaria Challenge Model, American Society for Clinical Pharmacology and Therapeutics, March 2018, Orlando USA
8. **James McCarthy** – World Malaria Congress, July 2018, Melbourne
9. **James McCarthy** – translational tools for Early Development of Antimalarials: the Human Malaria Challenge Model, Australian Red Cross Blood Service, May 2018, Sydney
10. **James McCarthy** – learnings from experimental human malaria infection studies, Walter & Eliza Hall Institute, November 2018, Melbourne
11. **Krispin Hajkowicz** – Carbapenem-Resistant *Acinetobacter baumannii* (CRAB) Outbreak Control using.

### Oral Presentations:

1. Characterization of new antimalarial combinations in Induced Blood Stage Malaria studies **James S. McCarthy**
2. A randomized controlled trial comparing parasite clearance profiles after single dose artesunate among subjects experimentally infected with artemisinin-resistant or artemisinin-sensitive *Plasmodium falciparum* parasites. Rebecca E. Watts, **Maria Rebelo**, Anand Odedra, Jörg J. Möhrle, Stephan Chalon, Louise Marquart, James S. McCarthy
3. Risk factors for infection with soil transmitted helminths in Timor-Leste: a longitudinal analysis during a community integrated WASH and deworming intervention **Susana Vaz Nery**, Naomi E. Clarke, James S. McCarthy, Rebecca Traub, Alice Richardson, Darren J. Gray, Suzy J. Campbell, Andrew J. Vallely, Gail M. Williams, Ross M. Andrews, Archie C. Clements
4. **Brodie B, Hurst T, Doidge M.** The effectiveness of a dedicated Cleaning Team Post Discharge – a Reduction of Positive Environments. ACIPC Conference 2018, Brisbane.

### Poster Presentations:

1. LB-5320 Live-Attenuated Hookworm Vaccination in Humans: Interim Results of the EVRA-Hookworm Trial . **Paul R. Chapman**, Paul Giacomini, Stacey Llewellyn, Christian Engwerda, Alex Loukas, James McCarthy. The ex vivo growth profile of artemisinin-resistant parasites after artesunate treatment in the induced blood stage malaria model **Maria Rebelo**, Rebecca Pawliw, Jeremy Gower, Hayley Mitchell, Rebecca E. Watts, Louise Marquart, Jörg J. Möhrle, James S. McCarthy
2. Safety and feasibility of apheresis to harvest and concentrate parasites in subjects with induced blood stage *Plasmodium vivax* infection **Anand Odedra, Rebecca Pawliw, Rebecca Watts, Kari Mudie, Glen Kennedy, David Laloo, James McCarthy**
3. **Hurst T, Doidge M, Hajkowicz K, Harris P, Forde B, Bergh H, Jennison A, Roberts L, Allworth T, Nimmo G, Beatson S, Paterson D.** Mastering Resistant Bacteria using Whole Genome Sequencing. ACIPC Conference 2018, Brisbane
4. **Brodie B, Hurst T, Doidge M.** The Effectiveness of a Dedicated Cleaning Team Post discharge: a reduction of positive environments. ACIPC 2018, Brisbane
5. **Gabatan I, de Ruiters C, Doidge M, Hurst T, Haddock T.** RBWH Hand Hygiene Program: leading the way to success, a two-year observational study of the hand hygiene compliance of Urology ward, ACIPC 2018, Brisbane.

## Internal Medicine Research Unit/ Internal Medicine and Aged Care

The Internal Medicine Research Unit supports investigator initiated collaborative research including basic, clinical and health services studies intended to directly improve hospital and post-hospital patient outcomes. We have expertise in design and evaluation of complex interventions using multi-methods research, and collaborate with a range of universities and health services.

### Our main focus areas are:

- Hospital-associated complications and frailty in older inpatients
- Multidisciplinary collaborative models of care for inpatients
- Multidisciplinary management of chronic diseases including heart failure and Fabry disease
- Safe prescribing
- Quality improvement methods, health services research methods and implementation science.

### Research highlights of 2018 include:

- Collaboration with a wide range of disciplines (medicine, nursing, nutrition and dietetics, occupational therapy, pharmacy) and specialty services (cancer care, nephrology, cardiology, geriatrics, critical, care emergency care, psychiatry, surgery)
- Publication of the primary outcomes of the 5-site EJECTION-HF randomised controlled trial in Journal of the American College of Cardiology-Heart Failure
- Ongoing analysis of CHERISH cluster randomised controlled trial, with publication of primary outcome validation paper in Journal of the American Geriatrics Society
- Completion of a hospital-wide point prevalence audit of cognitive impairment in older patients at RBWH, with preliminary results presented at the Australasian Delirium Association Meeting and the Australasian Association of Gerontology meeting
- Publication of evidence of long term (10year) improvements in nutrition care, recognised with a highly commended award in the Metro North Research Awards (complex healthcare challenges) and presented at the prestigious American Geriatrics Society conference
- Dr Adrienne Young was awarded the CAHRLI prize for Outstanding Leadership in Research, Learning and Innovation, and was RBWH Health Practitioner Researcher of the Year
- Dr Alison Mudge was awarded a Metro North Clinician Research Fellowship
- Two of our postgraduate students submitted their PhD thesis for examination.

In addition, we have built substantial capacity in implementation science and knowledge translation, collaborating with local and national partners. Activities led by Dr Mudge, Dr Young and Prue McRae have included a monthly knowledge translation interest group supporting 20 health professionals from diverse backgrounds; a 3-day Knowledge Translation course in Adelaide, hosted by Flinders University; and support for Sally Barrimore in leading MNHHS Allied Health-Translation into Practice (AH-TRIP) project.

### 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>Julie Adsett</b>	PhD Griffith 2012-2018	Exercise rehabilitation for patients with stable heart failure	Norman Morris, Suzanne Kuys, <b>Jennifer Paratz, Alison Mudge</b>
<b>Angela Byrnes</b>	PhD UQ 2015-2018	Investigating the nutritional status and care of older (≥65 years) patients on two general surgical wards: a multiphase, action research study	Judy Bauer, <b>Adrienne Young, Alison Mudge, Merrilyn Banks</b>
<b>Karen Lee-Steere</b>	M Phil UQ 2017-2020	Improving the care of the older patient with or at risk of delirium in the acute care setting: patient and carer perspectives	Sally Bennett, Jacki Liddle, <b>Alison Mudge</b>
Brooke Myers	PhD, UQ 2014-current	Role of the Pharmacist on the Medical Post-Take Ward Round	<b>Ian Coombes</b> , Charles Mitchell, <b>Peter Donovan</b> , Jennifer Whitty



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

Name	Type of Fellowship	Research Program	University (years)
<b>Alison Mudge</b>	Adjunct Professor	Improving acute and post-hospital care of older patients	QUT (2013-2018)
<b>Charles Denaro</b>	Associate Professor	Screening for Fabry Disease in Chronic Kidney Disease	UQ (1998-current)
<b>Dylan Flaws</b>	Queensland Junior Doctor Fellowship	Developing and validating a delirium risk score in older inpatients	2016-2018
<b>Prue McRae</b>	Adjunct Senior Lecturer and postdoctoral fellow	Preventing delirium and improving mobility	QUT (2018)
<b>Adrienne Young</b>	Adjunct Assoc Professor	Nutrition in older adults and hospital inpatients	Queensland University of Technology (2013 – current)
<b>Samantha Olenski</b>	Project manager and postdoctoral fellow	Nutrition care	

## 2018 Current RBWH Research Group / Department Led Research Activity

RBWH Research Group/Department Lead Researchers	Collaborative Researchers	Research Project Title
<b>Adrienne Young</b>	Mikaela Wheeler (UQ), <b>Angela Byrnes</b> , <b>Alison Mudge</b>	Co-designing a project to explore patient mealtime environments and experience
<b>Angela Byrnes</b>	<b>Adrienne Young</b> , <b>Merrilyn Banks</b> , <b>Alison Mudge</b> , Judy Bauer (UQ)	Investigating the nutritional status and care of older (≥65 years) patients on two general surgical wards: a multiphase, action research study
<b>Alison Mudge</b>	<b>Alison Mudge</b> , <b>Prue McRae</b> , <b>Samantha Olenski</b> , <b>Elise Treleaven</b> , <b>Margaret Cahill</b> , <b>Karen Lee-Steere</b>	Delirium Day: a hospital wide quality audit
<b>Alison Mudge</b>	<b>Merrilyn Banks</b> , <b>Adrian Barnett</b> (QUT), <b>Irene Blackberry</b> (Latrobe), <b>Ann Chang</b> (QUT), <b>Nick Graves</b> (QUT), <b>Ruth Hubbard</b> (UQ), <b>Sharon Inouye</b> (Harvard), <b>Sue Kurrle</b> (Uni of Sydney), <b>Kwan Lim</b> (Uni of Melbourne), <b>Prue McRae</b> , <b>Nancye Peel</b> (UQ), <b>Adrienne Young</b>	CHERISH Collaborative for Hospitalised Elders: reducing the Impact of Stays in Hospital
<b>Julian de Looze</b>	<b>Julian de Looze</b> , <b>Joan Webster</b> , <b>Charles Denaro</b> , <b>Alison Mudge</b> , <b>John Gowardman</b> , <b>Robyn Fox</b> , <b>Catriona Booker</b> , <b>Peter Thomas</b> , <b>Samantha Olenski</b> , <b>Elise Treleaven</b> , <b>Melissa Eastgate</b> , <b>Tracy Glynn</b>	Patients of Concern: a qualitative exploratory study within the Royal Brisbane and Women's Hospital
<b>Julie Adsett</b>	<b>Julie Adsett</b> , <b>Alison Mudge</b> , Norm Morris (Griffith Un)	Exercise adherence and outcomes in heart failure patients: substudy of EJECTION-HF
<b>Alison Mudge</b>	<b>Alison Mudge</b> , <b>Dylan Flaws</b> , <b>Gerard Byrne</b>	Systematic review of tools to predict delirium during adult inpatient admissions
<b>Alison Mudge</b>	<b>Alison Mudge</b> , <b>Margaret Shaw</b>	Effect of pre-planned physician involvement in care of adult surgical patients on clinical and health service outcomes: a systematic review
<b>Samantha Olenski</b>	<b>Alison Mudge</b> , <b>Adrienne Young</b> , <b>Prue McRae</b> , <b>Elise Treleaven</b> , <b>Kimberley Mallan</b> (ACU), <b>Zoe Walsh</b> (CISS), <b>Jill Ross</b> (CISS), <b>Alanna Geary</b> (Nursing and Midwifery)	Developing and validating a novel survey to identify barriers and enablers to improving nutrition care in acute and subacute inpatient settings
<b>Prue McRae</b>	<b>Alison Mudge</b> , <b>Jesse Spurr</b> , <b>Kaye Rolls</b>	Getting Eat Walk Engage to talk-is a virtual community of practice acceptable?
<b>Peter Donovan</b>	<b>Peter Donovan</b> , <b>Alison Mudge</b> , <b>Jenny Martin</b> (Uni Newcastle), <b>Michael Barras</b> (Princess Alexandra Hospital), <b>James Rowland</b> , <b>Champika Pattullo</b>	Interventions to improve safety and quality in the management of anticoagulants for therapeutic indications in hospital inpatients: systematic review
<b>Peter Donovan</b>	<b>Ian Coombes</b> , <b>Glen Kennedy</b> (Cancer Care Services), <b>Alison Mudge</b> (Internal Medicine), <b>Champika Pattullo</b> (Clinical Pharmacology), <b>Bonnie Tai</b> (Prince Charles Hospital)	Collaborative Optimisation of Anticoagulation (COAG) Pilot Study at RBWH
<b>Peter Donovan</b>	<b>Michael Barras</b> , (Princess Alexandra Hospital), <b>Ian Coombes</b> , <b>Jason Roberts</b> , <b>Ms Carla Scuderi</b> (Pharmacy), <b>Charles Denaro</b> (Internal Medicine), <b>John Atherton</b> , <b>Ms Bonnie Tai</b> (Prince Charles Hospital), <b>Ms Anita Pelecanos</b> (QIMR Berghofer)	Development of a therapeutic range for enoxaparin in patients with renal impairment

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

RBWH Research Group/Department Lead Researchers	Collaborative Researchers	Research Project Title
<b>Peter Donovan</b>	Nicola Harper, Dr Danielle Stowasser, Natasha Truloff (Metro North IT), <b>Ian Coombes, (Pharmacy), Charles Denaro (Internal Medicine)</b> , Timothy Dunn (Caboolture Hospital Pharmacy), Anita Pelecanos (QIMR Berghofer)	Evaluation of the Implementation of Electronic Prescribing using Interrupted Time-Series Analysis at Two Hospitals in Queensland
<b>Peter Donovan</b>	<b>Champika Pattullo</b> , Anthony Bell, David Arroyo	Trends in Opioid Prescribing in Australia: a Systematic Review
<b>Michael Tresilian</b>		Diagnosis delirium: improvement project

## 2018 Collaborative Research Activity involving RBWH Research Group / Department

Collaborative Lead Researchers	RBWH Researchers	Research Project Title
Laurie Grealish (Griffith/GCUH)	<b>Alison Mudge, Margaret Cahill</b>	Using Normalisation Process Theory to engage nurses in delirium care
Helen Edwards, Patricia Sinasac, Kathleen Finlayson, Fiona Coyer,	<b>Alison Mudge, Kerrie Coleman</b>	Reducing the prevalence and severity of wounds through implementation of the Champions for Skin Integrity model: Protecting Skin Integrity
<b>Natasha Roberts</b> (Cancer Care Services)	Monica Janda (QUT), <b>Alison Mudge, Kimberley Alexander, David Wyld</b>	i-PROMOS: Implementing Patients Reported Outcome Measures in Oncology Outpatients
<b>Dylan Flaws</b> (Mental Health)	<b>Alison Mudge, Gerard Byrne</b> (Mental Health), <b>Prue McRae, Megan Nitz</b> (Mental Health), Conor O'Launaigh (TPCH), Trevor Hollingsworth (Caboolture), <b>Adrienne Young</b>	Delirium in older psychiatry inpatients: protocol for an observational study
<b>Phillip Robinson (Rheumatology)</b>	<b>Peter Donovan</b> , Nicola Dalbeth (University of Auckland, Auckland Hospital)	A Health Economic Analysis Colchicine Therapy for Gout Prophylaxis
<b>Ian Coombes (Pharmacy)</b>	<b>Peter Donovan</b> , Charles Mitchel (UQ), Brooke Myers, Christy Noble, (Gold Coast University Hospital, Griffith University)	Improving Intern Medical Officer Prescribing through an Intervention of Self-Assessment and Feedback
Dr Susan Jordan (Queensland Institute of Medical Research Berghofer), Prof Sallie-Anne Pearson (University of New South Wales), Dr Nirmala Pandeya (University of Queensland), Assoc Prof Michael Coory (Murdoch Children's Research Institute), Dr Katrina Spilsbury (Curtin University of Technology)	<b>Dr Peter Donovan</b> (Clinical Pharmacology, Internal Medicine and Aged Care)	IMPROVE – Investigating Medication Re-Purposing to Reduce risk of Ovarian cancer and Extend survival
Louise Cullen (Emergency and Trauma Centre)	Nathan Brown, <b>Peter Donovan, Ian Coombes, Jaimi Greenslade</b> , David Hughes, Elizabeth Doran	Prevalence and characteristics of medication-related presentations to the emergency department. Emergency and Trauma Centre, Royal Brisbane and Women's Hospital.
W Hoy (UQ)	<b>Andrew Mallett, Helen Healy, Charles Denaro</b> , Mark Thomas, Vincent Lee.	aCQuiRE: to determine the prevalence of Fabry Disease in individuals with chronic kidney disease
David Copland (UQ), Tracy Roxbury (UQ), Katie McMahon (UQ), Greig de Zubicaray (QUT), Marcus Meinzer (UQ)	<b>Penni Burfein (SP), Anna Farrell (SP)</b> , Dr Kana Appadurai (GARU), Dr Andrew Wong (Stroke), Prof Alan Coulthard	Predicting and Promoting Sub-Acute Aphasia Recovery
Linda Worrall (UQ), David Copland (UQ), Melissa Lawrie (Gold Coast HHS), Liz Ward (UQ), Moya Pattie (Wesley)	<b>Penni Burfein (SP) (GARU), Anna Farrell (SP)</b>	Can a new, intensive model of aphasia rehabilitation achieve better outcomes than usual care?

## 2018 Research Awards and Achievements

Recipient	Award	Event
<b>Adrienne Young</b> , Merrilyn Banks, <b>Alison Mudge</b>	Highly Commended, Complex Health Challenges	MNHHS Research Excellence Awards, 22 <sup>nd</sup> May 2018
<b>Margaret Shaw</b>	Ramesh Nagappan Memorial Prize	Internal Medicine Society of Australia and New Zealand Annual Scientific Meeting
<b>Adrienne Young</b>	Outstanding Leadership in Research, Learning and Innovation	CAHRLI, 20 <sup>th</sup> June 2018
<b>Adrienne Young</b>	Health Practitioner Researcher of the Year	RBWH Research Symposium, 11-13 <sup>th</sup> September 2018
<b>Adrienne Young</b>	2019 Royal Alumni Research Encouragement Award	2019 RBWH and RBWH Foundation Grant Awards Ceremony

## 2018 Research Grants – Awarded

Investigators <i>(RBWH staff in bold)</i>	RBWH Research Groups/ Departments	Project Title	Granting Body	Amount in 2018	Total Amount <i>(years)</i>
<b>Olenski S, Mudge A, Young A, McRae P</b> , Mallan K.	Internal Medicine Research Unit; RBWH Department of Nutrition and Dietetics	Developing and validating a nutrition care survey	RBWH Research Foundation	\$9,041	\$32,000 (2018-2019)
<b>McRae P, Mudge A</b> , Spurr J, Rolls, K	Internal Medicine Research Unit	Getting Eat Walk Engage to talk-is a virtual community of practice acceptable?	RBWH Research Foundation	\$24,406	\$39,900 (2018-2019)
Edwards H, <b>Coleman K</b> , Sinasac P, Finlayson K, Coyer F, Schluter J, Parker C, <b>Mudge A</b>	Internal Medicine Research Unit, Skin Integrity Service	Reducing the prevalence and severity of wounds through implementation of the Champions for Skin Integrity Model-Protecting Skin Integrity	Queensland Health Nursing and Midwifery Fellowships	\$39,795	\$119,385 (2017-2019)
<b>Mudge A, McRae P, Cahill M, Lee-Steere K, Finnigan S</b>	Internal Medicine Research Unit	Dementia and delirium day: a point prevalence study	RBWH Research Foundation	\$27,180	\$32,180 (2017-2018)
<b>De Looze J, Denaro C, Lipman J, Webster J, Mudge A, Thomas P, Olenski S</b>	Internal Medicine and Aged Care, Internal Medicine Research Unit, Intensive Care Unit, Centre for Nursing Research	Identifying patients of concern	RBWH Research Foundation	\$15,537	\$40,000 (2017-2018)
<b>Lee-steere, K.</b> , Bennett, S., Liddle, J. and <b>Mudge, A.</b>	Internal Medicine Research Unit; RBWH and UQ	Improving the care of the older patient with or at risk of delirium in the acute care setting: patient and carer perspectives	RBWH Research Foundation	\$36,863	\$36,863 (2017-2019)
<b>Byrnes, A.</b>	Nutrition and Dietetics; Internal Medicine Research Unit	Investigating the nutritional status and care of older (≥65 years) patients on two general surgical wards: A multiphase, Action Research study	RBWH Scholarship (top-up)	\$6,000	\$6,000 (2018)
<b>Louise Cullen, Nathan Brown, Peter Donovan, Ian Coombes, Jaimi Greenslade, David Hughes, Elizabeth Doran</b>	<b>Emergency and Trauma Centre, Pharmacy, Clinical Pharmacology, Internal Medicine and Aged Care</b>	Prevalence and characteristics of medication-related presentations to the emergency department. Emergency & Trauma Centre, Royal Brisbane and Women's Hospital	Emergency Medicine Foundation	\$31,410	\$31,410 (2018)
Dr Susan Jordan (Queensland Institute of Medical Research Berghofer), Prof Sallie-Anne Pearson (University of New South Wales), Dr Nirmala Pandeya (University of Queensland), Assoc Prof Michael Coory (Murdoch Children's Research Institute), Dr Katrina Spillsbury (Curtin University of Technology), <b>Dr Peter Donovan</b>	<b>Clinical Pharmacology, Internal Medicine and Aged Care</b>	IMPROVE – Investigating Medication Re-Purposing to Reduce risk of Ovarian cancer and Extend survival	National Health and Medical Research Council	\$95,104	\$438,313.20 (2017-2021)

## 2018 Research Grants – Awarded (cont)

Investigators (RBWH staff in bold)	RBWH Research Groups/ Departments	Project Title	Granting Body	Amount in 2018	Total Amount (years)
W Hoy, <b>A Mallett, H Healy, C Denaro</b> , M Thomas, V Lee	<b>CKD.QLD, Centre for Chronic Disease UQ; Internal Medicine Research Unit</b>	aCQuiRE: assessing the prevalence of Fabry disease in CKD	Sanofi-Genzyme	\$236,638	\$946,554 (2016-2019)
Penni Burfein	Speech Pathology/ GARU	Return to work for younger stroke survivors with aphasia in the Australian context	CAHLRI Pre-PhD/Pre-MPhil Scholarship	\$13,077	\$13,077 (2018)
Sarah Wallace, David Copland, Stephen Birch, <b>Anna Farrell, Penni Burfein</b> , Anne Hill, Tanya Rose, Madeline Cruice	Speech Pathology	The health and economic value of a speech pathology student placement delivering technology-enhanced treatment for aphasia	University of Queensland Health and Behavioural Science Faculty Economic and Health Value of Student Placements Research Grants	\$50,000	\$50,000 (2018)

## 2018 Research Publications

### Journal Articles:

- Mudge AM, Denaro CP, Scott A** Et al. Addition of supervised exercise training to a post-hospital disease management program for patients recently hospitalized with acute heart failure: the EJECTION-HF randomized trial. *JACC: Heart Failure* Feb 2018, 6 (2) 143-152
- Mudge A, McRae P**, Hubbard R Et al. Hospital-associated complications of older people: a proposed multi-component outcome for acute care research. *J Am Geriatr Soc* published early view 2018 Nov 13, 2018 doi:10.1111/jgs.15662
- Lynch EA, **Mudge A**, Knowles S, Kitons AL, Hunter SC, Harvey G. "There is nothing so practical as a good theory": a pragmatic guide for selecting theoretical approaches for implementation projects. *BMC Health Serv Res* 2018; 18:857
- Cahill M, Lee-Steere K, Mudge A, McRae P**. Eat Walk Engage: a delirium prevention program for acute care. *Aust J Dementia Care* 2018; 7 (3)
- Byrnes A, Young A, Banks M, Mudge A**, Bauer J. Exploring practice gaps to improve perioperative nutrition care (Experience Study): a qualitative study to identify barriers to implementation of evidence-based practice guidelines *Eur J Clin Nutr* published online 14 August doi.or/10.1038/s41430-018-0276-x
- Byrnes A, Mudge A**, Bauer J, **Young A**. Prospective application of an implementation framework to improve postoperative nutrition care processes: Evaluation of a mixed methods implementation study. *Nutr Diet* 2018; 75 (4): 353-362
- Byrnes A., Worrall J., Young A., Mudge A., Banks M.** & Bauer J. Early post-operative diet upgrade in older patients may improve energy and protein intake but patients still eat poorly: an observational pilot study. *J Hum Nutr Diet* 2018; 31:818-824
- Byrnes A, Young A, Banks M, Mudge A**, Bauer J. The use of handgrip strength in nutrition risk screening of older patients admitted to general surgical wards *Nutr Diet* 2018; 75 (5): 520-526
- Mudge AM, Douglas C, Sansome X, Tresillian M, Murray S, Finnigan S, Blaber C**. Risk of 12-month mortality among hospital inpatients using the surprise question and SPICT criteria: a prospective study *BMJ Supportive & Palliative Care*. doi: 10.1136/bmjspcare-2017-001441 (Epub Online First: 02 March 2018)
- Young A, Mudge AM**, Isenring E, Banks M. Improving nutritional discharge planning and follow-up in older medical inpatients: Hospital to Home Outreach for Malnourished Elders (HHOME) *Nutr Diet* 2018 75(3): 283-290
- Young A, Mudge A, Banks M**. Improving nutrition care and intake for older hospital patients through system-level dietary and mealtime interventions. *Clinical Nutrition ESPEN* 2018; 24:140-147
- Mudge AM**, Hubbard RE. Frailty: mind the gap. *Age Ageing* 2018; 47(4): 508-511
- Adsett JA**, Morris NR, Kuys SS, **Paratz JD, Mudge AM**. Motivators and barriers for participation in aquatic and land-based exercise training programmes for people with stable heart failure: A mixed methods approach. *Heart Lung*. 2018 Dec 4. pii: S0147-9563(18)30335-2. doi: 10.1016. (epub ahead of print)
- Philip C. Robinson, Nicola Dalbeth and **Peter Donovan**. The Cost-effectiveness of Biannual Serum Urate (SU) Monitoring after Reaching Target in Gout: A Health Economic Analysis Comparing SU Monitoring. *The Journal of Rheumatology* (2018). DOI: 10.3899/jrheum.170199
- Aranha AA, Petrus P, Chiang PP, **Denaro CP**. Are all METcalls Required? Patient Characteristics Who Have MET Calls in General Medical Wards. *Curr Trends Intern Med* 2018, DOI: 10.29011/CTIM-114. 100014.



## 2018 Conference Presentations – Invited Speaker, Oral and Poster

### Invited Speaker;

1. **Mudge, A.** Collaborative co-management of older surgical patients: how do physicians add value? Australia and New Zealand College of Anaesthetists Perioperative Medicine Special Interest Group Meeting Melbourne 2018
2. **Mudge A.** Impact of frailty on exercise and heart failure. Cardiac Society of Australia and New Zealand Annual Scientific Meeting Brisbane August 2018
3. **Mudge A.** Mobility, frailty and exercise in older people. Australian Cardiovascular Health and Rehabilitation Association Annual Scientific Meeting Brisbane August 2018
4. **Mudge A.** Improving hospital care for older people. Getting evidence into practice. Jeremy Anderson Oration, Peninsula Health Research Week November 2018.

### Oral Presentations:

1. **Young A,** Banks M, Pei Yen Kwek T, **Mudge A.** Improving nutritional intake and care in hospital: a ten-year journey of quality improvement and research in practice. Dietitians Association of Australia. May 2018
2. **Mudge A, Cahill M, Lee-Steere K, Finnigan S, Treleaven E, McRae P.** Prevalence of cognitive impairment in acute older inpatients and associated documented care needs: a hospital point prevalence study. DECLARED Australasian Delirium Association meeting Melbourne September 2018
3. **Treleaven E, Mudge A, McRae P, Lee-Steere K, Cahill M.** Delirium Day: cognitive impairment and the carer experience. DECLARED Australasian Delirium Association meeting Melbourne September 2018
4. **Shaw M, Mudge A.** Effectiveness of physician involvement in care of surgical patients: a systematic review and meta-analysis. Internal Medicine Society of Australia and New Zealand Annual Scientific Meeting Queenstown September 2018
5. **McRae P, Treleaven E, Lee-Steere K, Cahill M, Finnigan S, Mudge A.** Cognitive impairment in a tertiary hospital: prevalence and carer experience. Australian Association of Gerontology, Melbourne November 2018.

### Poster Presentations:

1. **Byrnes A, Young A, Mudge A,** Banks M, Bauer J. Exploring practice gaps to improve Perioperative Nutrition Care (Experience Study): a qualitative study to identify barriers to implementation of evidence-based practice guidelines. Dietitians Association of Australia. May 2018
2. Worrall J, **Byrnes A,** Banks M, **Mudge A, Young A,** Bauer J. Postoperative oral intake of older ( $\geq 65$  years) general surgical patients and factors associated with inadequate intake on postoperative day 2. Dietitians Association of Australia. May 2018
3. **Young A,** Banks M, Kwek T, **Mudge A.** Improving nutritional intake and care for older inpatients: a ten-year journey of quality improvement and research in practice. Annual Scientific Meeting of the American Geriatrics Society, May 2018
4. **Young A, Mudge A, McRae P,** Gray L, Beattie E, Graham F, Whiting L, Banks M, Hubbard R. Toward the Older Person Friendly Hospital: barriers and enablers within the Australian context. Annual Scientific Meeting of the American Geriatrics Society, May 2018
5. **Ian Coombes, Peter Donovan,** Brooke Myers, Christy Noble, Charles Mitchell. Improving Intern Medical Officer Prescribing through an Intervention of Self-Assessment and Feedback. Australasian Society of Experimental and Clinical Pharmacologist and Toxicologist Annual Scientific Meeting, Nov 2018
6. Wong Y, Nunan T, Hickey A, **Denaro CP, Adsett J,** Peters R, **Atherton J.** From Hospital to Home: insights from the Queensland State-wide Heart Failure Support Services Registry on Heart Failure Transitional Care. Cardiac Society of Australia and New Zealand Annual Scientific Meeting. Heart, Lung & Circ 2018 DOI 10.1016/j.hlc.2018.06.135
7. **Adsett J, Hickey A,** Foreman R. Heart Education Assessment Rehabilitation Toolkit (HEART) Online: 5 Years On. Heart Lung Circ. Cardiac Society of Australia and New Zealand Annual Scientific Meeting, Brisbane August 2018
8. Wong Y, Hickey A, Nunan T, **Adsett J, Atherton J.** Gender differences in patient characteristics and quality of care indicators among referrals to Queensland Statewide Heart Failure Services. Cardiac Society of Australia and New Zealand Annual Scientific Meeting, Brisbane August 2018.

## Other Communications and Outputs:

**Adrienne Young.** Older people in hospital are having their cake and eating it too: A 10-year journey to improve nutrition at the Royal Brisbane and Women's Hospital. The Australian Hospital Healthcare Bulletin p56-7, Winter 2018

**Angela Byrnes.** Implementation and process evaluating using an implementation framework. Allied Health Translating Research into Practice website <https://www.tri.edu.au/online-pd-suite>

**Alison Mudge.** Invited visiting scholar Flinders Medical Centre 2019 including keynote address "Eat Walk Engage: improving hospital care of older people"

Alison Mudge. Invited speaker AusHSI Knowledge Translation Showcase QUT Gardens Point November 2018

**Alison Mudge, Prue McRae, Adrienne Young.** Facilitators and co-leads, Knowledge Translation 3-day workshop, Flinders University November 2018.

### IMDTU staff participated in two research trials in this period:

Epstein-Barr virus-specific T cell therapy for progressive multiple sclerosis (PI Prof M. Pender)

The free cortisol response to Synacthen and other aspects of Endocrine. Physiology in Healthy Participants: (PI Dr Gladness Nethathe).

## Kidney Health Service

More of our people presented the excellent work we do in national and international places in 2018, normalising research in our workplaces.

In addition to mentoring these early career researchers the Kidney Health Research Leadership Group collectively supervised 25 Research Higher Degree students, three to completion. The Group developed our research capacity further through a Visiting Scholar program, hosting five International Academics to interact with our staff, and three Symposia, to broaden our networks. Their work has attracted named awards from Academic and Government Institutions.

Research revenue in calendar year 2018 was in excess of \$3M. Grant funding into 2019 is secured including >\$500,000 in new NHMRC funding, one of Australia's most prestigious granting bodies. In addition, our RHD students continue to be successful in winning new start and renewal scholarships from Academic and Government Institutions to support themselves during their studies.

### Supervised Post-Graduate Research Students

Name ( <i>RBWH staff in bold</i> )	Current Studies ( <i>e.g. PhD, Masters etc.</i> ) University ( <i>duration</i> )	Research Project Title	Supervisors ( <i>RBWH staff in bold</i> )
Hajar Alasmari	Conferred PhD, QUT (2013-2018)	Examining intensive care nurses' clinical decision-making associated with acute kidney injury and continuous renal replacement therapy	<b>Ann Bonner, Fiona Coyer</b>
Kylie Barr	PhD, UWS (Sydney) (2015-2019)	"Evaluation of the effectiveness of intradialytic yoga for patients with end stage kidney disease"	Caroline Smith, Birinder Cheema, <b>Helen Healy</b>
Marina Cousins	PhD, CQU (2018-2024)	Interpersonal relationships with people receiving haemodialysis	Julie Bradshaw, <b>Ann Bonner</b>
<b>Bryan Gregory</b>	PhD, QUT (2016-2022)	The effects of continuous renal replacement therapy and sustained low-efficiency dialysis on immune-suppressive drug levels in critically ill patients with acute kidney injury	<b>Ann Bonner, Fiona Coyer</b>
Kathryn Havas	Conferred PhD, QUT (2014-2018)	Comparison of a brief and an in-depth intervention to support self-management in people with chronic kidney disease	<b>Ann Bonner, Clint Douglas</b>
Kushani Jayasinghe	Doctor of Philosophy, UQ	"Clinical utility of targeted whole exome sequencing within a multidisciplinary renal genetics clinic"	<b>Andrew Mallet</b>
Muhammad Ali Khan	PhD, UQ (2017-2020)	Treating chronic kidney disease with plant extracts of elephant foot yam	Glenda Gobe, <b>Andrew Kassianos, Helen Healy</b>
Lan Van Hoang	PhD, QUT (2016-2019)	Relationship between health care supports, social supports and patient outcomes among haemodialysis population in Vietnam	<b>Ann Bonner, Theresa Green</b>
Becker M.P. Law (Meng-Po LAW)	PhD, QUT (2015-2019)	Functional characterisation of lymphocyte subsets in human kidney disease	<b>Andrew Kassianos, Helen Healy, Kenneth Beagley, Ray Wilkinson</b>
Tain Lloyd	MAppSc, QUT (2017-2019)	Investigation of chronic kidney disease and stroke	<b>Ann Bonner, Theresa Green, Louise Purtell</b>
Dominique McConnachie	Doctor of Philosophy, UQ	"Phenotype-genotype correlations in cystic kidney disease"	<b>Andrew Mallet</b>
Amanda Mckie	MPhil, QUT (2018-2022)	Understanding nurses' perception of sexual dysfunction in people with end stage kidney disease requiring haemodialysis	<b>Ann Bonner, Theresa Green</b>
<b>David McIntyre</b>	PhD, QUT (2016-2022)	The development and validation of haemodialysis nurse sensitive indicators	<b>Ann Bonner, Fiona Coyer</b>
<b>Molly Milazi</b>	DHlthSc, QUT (2014-2020)	Nurse-led teach back intervention to improve people with End Stage Kidney Disease adherence with phosphate control	<b>Ann Bonner, Clint Douglas</b>
<b>Pauline Nicholas</b>	MPhil, QUT (2017-2020)	Measuring the prevalence of mild cognitive impairment in end stage kidney disease	<b>Ann Bonner, Theresa Green, Louise Purtell</b>
Nguyet Thi Nguyen	Conferred PhD, QUT (2014-2018)	Self-management of people with early stages of chronic kidney disease in Hanoi, Vietnam	<b>Ann Bonner, Clint Douglas</b>
Evan Owens	PhD, UQ (2017-2020)	Using biomarkers of chronic kidney disease progression to predict future kidney function: a novel clinical model	Glenda Gobe, Wendy Hoy, David Vesey, <b>Helen Healy</b>
Arti Raghubar	Masters, UQ (2016-2018)	Investigating underlying molecular processes in IgA nephropathy cases using SWATH-MS	<b>Andrew Mallett, Andrew Kassianos, Helen Healy</b>

## Supervised Post-Graduate Research Students (cont)

Name (RBWH staff in bold)	Current Studies (e.g. PhD, Masters etc.) University (duration)	Research Project Title	Supervisors (RBWH staff in bold)
<b>Cassandra Rawlings</b>	PhD, UQ (2018-2024)	“Elderly and frail patients with kidney disease: experiences in different care pathways”	<b>Helen Healy, Ann Bonner</b>
<b>Haannah Rheault</b>	DHLthSc, QUT (2016-2022)	Health literacy and chronic disease self-management in Indigenous Australians	<b>Ann Bonner, Fiona Coyer</b>
Senanayake Sameera	PhD, QUT (2018-2020)	“Prediction of graft survival and cost effectiveness of kidney transplantation according to donor quality levels in Australia”	Sanjeewa Kularatna, Nicholas Graves, <b>Helen Healy, Keshwar Baboolal</b>
<b>Carla Scuderri</b>	PhD, UQ (2017-2023)	“Improving patient centred outcomes in kidney transplant recipients”	Christine Staatz, <b>Helen Healy, Andrew Mallett</b>
Sri Krishna Venuthurupalli	PhD, UQ (2010-2019)	“CKD.QLD: profile of chronic kidney disease (CKD) from Darling Downs Health and Hospital Service (DDHHS)”	Wendy Hoy, <b>Helen Healy</b> , Robert Fassett
Nicole Wu	PhD	Regulation of NCC in health, diseases of salt homeostasis	Michael Stowasser, <b>Martin Wolley</b>
Harith Yapa	PhD, QUT (2017-2020)	Perceived palliative care needs of patients with Chronic Kidney Disease (CKDu) in Sri Lanka	<b>Ann Bonner; Louise Purtell</b> , Shirley Connell

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

Name	Type of Fellowship	Research Program	University (years)
<b>Ann Bonner</b>	Honorary Research Fellow	Renal Nursing Professorial Unit	Queensland University of Technology – QUT (2011-current)
<b>Ann Bonner</b>	Honorary Professor	Faculty of Nursing and Midwifery	Hanoi Medical University (2014-current)
<b>Ann Bonner</b>	Visiting Renal Nurse Scholar	Renal Medicine	Princess Alexandra Hospital (2013-current)
<b>Ann Bonner</b>	Visiting Nurse Scholar	Department of Nursing	Logan and Beaudesert Hospitals (2014-current)
Ann Cameron	Manager	CKD.QLD and CKD.CRE	UQ (xxxx-current)
<b>Vishal Diwan</b>	Honorary Research Appointment	NHMRC Chronic Kidney Disease Centre for Research Excellence and University of Queensland.	Research Assistant, Faculty of Medicine, University of Queensland
Kurt Giuliani	Research Assistant	Conjoint Kidney Research Laboratory	(2018-current)
Sebastian Hutlin	Research Student	Conjoint Kidney Research Laboratory	2018
Matthew Jose	Credentialed Honorary Research Appointment	Kidney Genetics and Genomics Program	Royal Hobart Hospital and University of Tasmania
<b>Andrew Kassianos</b>	Post-doctoral Fellow	School of Biomedical Sciences, Conjoint Kidney Research Laboratory	Queensland University of Technology – QUT (2013-current)
<b>Andrew Kassianos</b>	Honorary Fellow	School of Medicine	University of Queensland – UQ (2015-current)
<b>Katrina Kildey</b>	Post-doctoral Fellow	Conjoint Kidney Research Laboratory	(2017-current)
<b>Andrew Mallett</b>	Credentialed Honorary Medical Officer,	Children’s Hospital Westmead Clinical Liaison and Multidisciplinary Team, Australian Renal Gene Panels	2016 – Present
<b>Andrew Mallett</b>	Credentialed Honorary Medical Officer	Children’s Health Queensland (Lady Cilento Children’s Hospital)	2016 – Present
<b>Andrew Mallett</b>	Research Fellowship	RACP Jacquot Research Establishment Fellowship	2018
Dominique McConnachie	Honorary Research Appointment	University of Queensland Institute for Molecular Bioscience	University of Queensland – UQ (2018 – current)
<b>Louise Purtell</b>	Honorary Post-Doctoral Fellow	Health Services Research Group	QUT (2016 – current)
Xiangju Wang	Research Assistant	Conjoint Kidney Research Laboratory	(2012-current)
Zaimin Wang	Honorary Post-Doctoral Fellow	CKD.QLD and CKD.CRE	UQ (xxxx-current)
Ray Wilkinson	Post-doctoral Fellow	Conjoint Kidney Research Laboratory	QUT (-2018), UQ (-2018)
Jenny Zhang	Honorary Post-Doctoral Fellow	CKD.QLD and CKD.CRE	UQ (xxxx-current)

## 2018 Current RBWH Research Group / Department Led Research Activity

RBWH Research Group/Department Lead Researchers	Collaborative Researchers	Research Project Title
Conjoint Kidney Research Group – Mechanisms of Progression of CKD <b>Helen Healy</b>	<b>Andrew Kassianos, George John, Andrew Mallett, Katrina Kildey</b> , Ray Wilkinson (QPath), Xiangju Wang (QPath), Kurt Giuliani (QPath), Becker Law (QUT), Arti Raghubar (QPath), Muhammad Ali Khan (UQ)	Treating progressive chronic kidney disease (CKD) by targeting how proximal tubular epithelial cells (PTEC) control the inflammatory micro-environment – a program of research into how PTEC regulate cells of the immune response in the inflammatory phase of CKD
Conjoint Kidney Research Group - Mechanisms of Chronic Kidney Rejection <b>Helen Healy</b>	<b>Andrew Kassianos, Katrina Kildey, George John</b> , Ray Wilkinson (QPath), Ross Francis (PAH), <b>Sebastian Hultin</b>	Targeting proximal tubular epithelial cells (PTEC) in chronic allograft nephropathy – a program of research into changing long-term graft loss in kidney transplantation through modification of the functions of PTEC
CKD.Qld Collaborative <b>Helen Healy</b>	Wendy Hoy (UQ)	Co-Chairs, CKD.QLD – a collaborative of clinicians in the public kidney practices in Queensland and academics for the purposes of studying the natural history of chronic kidney disease, practice patterns across the state and biobanking of biosamples with linked phenotypes
Health Services Implementation Group - Keeping Kidney Collaborative <b>Helen Healy</b>	<b>Adrian Kark, Alexandra Cation; Ann Bonner, Louise Purtell</b>	Studying the implementation of the General Practitioner with Special Interest delivery of services at Caboolture
Health Services Implementation Group – Kidney Supportive Care Collaborative <b>Helen Healy</b>	<b>Ann Bonner; Louise Purtell; Ilse Berquier; Julie Kirby; Carla Scuderi</b>	Continuing studies into the efficacy and value-added effect of services tailored to the needs of people with advanced kidney disease at the end of life
<b>Helen Healy, Andrew Mallett, Carla Scuderi</b>	Christine Staatz, <b>George John, Margaret Jacks</b> , Suzanne Parker, Jason Roberts	Innovative blood sampling to reduce the burden of long-term treatment for kidney transplant recipients
<b>Helen Healy, Andrew Mallett, Carla Scuderi</b>	<b>Sadia Jahan</b> , Christine Staatz, <b>George John, Margaret Jacks</b> , Suzanne Parker, Jason Roberts	An observational pharmacokinetic study of Bactrim® (trimethoprim-sulfamethoxazole) in renal transplant recipients
aCQuiRE Collaborative <b>Helen Healy, Andrew Mallett</b>	<b>Charles Denaro</b> , Wendy Hoy (UQ), Samantha Stark, Vincent Lee (Westmead Hospital) Mark Thomas (Sir Charles Gardner Hospital)	A point prevalence study of Fabry's disease in people managed in specialist nephrology practices
KidGen Collaborative, <b>Andrew Mallett</b>	<b>Chirag Patel</b> ; Amali Mallawaarachichi (Liverpool Hospital), Cathy Quinlan (Melbourne Children's Hospital), Zonitza Stark (Murdoch Research), Randall Faull (Royal Adelaide Hospital) Aron Chakera (Newcastle Hospital) Melissa Little	<ul style="list-style-type: none"> <li>• National Clinic Evaluation</li> <li>• HIDDEN Flagship</li> <li>• Clinical Implementation Science</li> <li>• IKD HSU</li> </ul>
<b>Andrew Mallett</b>	<b>Belinda Elford</b>	An open – label Phase 2 proof-of-concept study in patients with C3 Glomerulopathy (C3G) or Immune-complex Membranoproliferative Glomerulonephritis (IC-MPGN) treated with ACH-0144471
<b>Andrew Mallett</b>	<b>Belinda Elford</b>	A phase 2/3 trial of the efficacy and safety of bardoxolone methyl in patients with Alport Syndrome
<b>Dwarakanathan Ranganathan</b> , Drew Yates, Paul Kubler	Saw Yu Mu	Retrospective study of prevalence and type of infection in patients with renal ANCA associated vasculitis and their risk factors
<b>Sharad Ratanjee</b>	<b>Belinda Elford</b>	A phase 3 randomized, open-label (Sponsor Blind), active controlled, parallel-group, multi centre, event driven study in dialysis subjects with anaemia associated with chronic kidney disease to evaluate the safety and efficacy of daprodustat compared to recombinant human erythropoietin, following a switch from erythropoietin-stimulating agents
PD Research Group, <b>Lesley Williams, Nicola Williams</b>	<b>Pauline Nicholas, Carla Scuderi, Deborah Smith, Michelle Rice, Martin Wooley, Dwarakanathan Ranganathan</b>	A feasibility study comparing topical use of acetic acid at the exit site versus mupirocin to prevent exit site infections (ESI) in peritoneal dialysis (PD) patients (ACES Study)
<b>Martin Wolley</b>	Mark Marshall, Carmel Hawley, David Johnson, Matthew Roberts	Twice weekly haemodialysis in Australia and New Zealand

## 2018 Collaborative Research Activity involving RBWH Research Group / Department

Collaborative Lead Researchers	RBWH Researchers	Research Project Title
Suceena Alexander (Christian Medical College, Vellore, India)	<b>Helen Healy</b> (Kidney Health Service), <b>George John Healy</b> (Kidney Health Service), <b>Andrew Kassianos</b> (Kidney Health Service)	Pathogenic molecular/cellular responses leading to chronic kidney disease in primary Focal and Segmental Glomerulosclerosis (FSGS) in Indians
Glenda Gobe (UQ)	<b>Helen Healy</b> (Kidney Health Service), <b>Andrew Kassianos</b> (Kidney Health Service)	Treating chronic kidney disease with plant extracts of elephant foot yam
Nick Graves (QUT)	<b>Helen Healy</b> (Kidney Health Service), <b>Keshwar Baboolal</b> (Kidney Health Service)	Cost utility of human kidney transplantation
Alberta Hoi (Monash Medical Centre)	<b>Dwarakanathan Ranganathan</b> (Kidney Health Service), <b>Paul Kubler</b> (Rheumatology)	Australian Lupus Registry and Biobank
Wendy Hoy (UQ)	<b>Helen Healy</b> (Kidney Health Service) <b>Carol Douglas</b> (Palliative Care)	NHMRC Chronic Kidney Disease Centre of Research Excellence
Nicole Isbel	<b>Dwarakanathan Ranganathan Healy</b> (Kidney Health Service), <b>Andrew Mallet Healy</b> (Kidney Health Service), Cameron Curley (Hematology)	An observational, non-interventional, multi-centre, multi-national study of patients with Atypical Haemolytic-Uraemic Syndrome (aHUS Registry)
David Jayne (Cambridge University)	<b>Dwarakanathan Ranganathan</b> (Kidney Health Service)	A Randomized, Double-Blind, Active-Controlled, Phase 3 Study to Evaluate the Safety and Efficacy of CCX168 (Avacopan) in Patients with Anti-Neutrophil Cytoplasmic Antibody (ANCA) - Associated Vasculitis Treated Concomitantly with Rituximab or Cyclophosphamide/Azathioprine
David Jayne (Cambridge University)	<b>Dwarakanathan Ranganathan</b> (Kidney Health Service)	An international, open label, randomised controlled trial comparing rituximab with azathioprine as maintenance therapy in relapsing ANCA-associated vasculitis. RITAZAREM
Melissa Little (Murdoch Children's Research Institute)	<b>Andrew Mallett</b> (Kidney Health Service) <b>Helen Healy</b> (Kidney Health Service)	Applying functional genomics to kidney disease
Multi Centre Study	<b>Dwarakanathan Ranganathan</b> (Kidney Health Service), <b>Andrew Mallett</b> (Kidney Health Service)	Treatment of Proteinuria Due to Treatment Resistant or Treatment Intolerant Idiopathic Focal Segment Glomerulosclerosis (PODOCYTE) Study
Caroline Smith (Uni Western Sydney)	<b>Helen Healy</b> (Kidney Health Service)	Effectiveness of intradialytic yoga for patients with end stage kidney disease
Michael Stowasser, David Ellison, Robert Fenton, Paul Welling, Eric Delpire	<b>Martin Wolley</b> (Kidney Health Service)	Role of potassium in hypertension
Santosh Varughese (Christian Medical College, Vellore, India)	<b>Helen Healy</b> (Kidney Health Service), <b>George John</b> (Kidney Health Service), <b>Andrew Kassianos</b> (Kidney Health Service)	Molecular profiling in renal allograft recipients with acute rejection and chronic allograft dysfunction

## 2018 Research Awards and Achievements

Recipient	Award	Event
Ann Bonner, Fiona Coyer, Theresa Green, Ray Chan	QUT Vice Chancellor Award	
Ann Bonner, Louise Purtell, Ilse Berquier, Helen Healy	Best Research paper	Renal Society of Australasia, 46 <sup>th</sup> Annual Conference, 21 <sup>st</sup> -23 <sup>rd</sup> June, Adelaide
Ilse Berquier, Ann Bonner, Louise Purtell, Helen Healy, Bernadette Taylor, Danielle Heffernan, Carol Douglas	Best poster	7 <sup>th</sup> Palliative Care Nursing Association Conference, 20-21 May, Brisbane
Haunnah Rheault, Fiona Coyer, Ann Bonner	Best paper	Metro North Hospital and Health Service Nursing and Midwifery Leadership Conference, 1-2 March, Brisbane
Kurt Giuliani	University of Queensland Postgraduate Scholarship	PhD studies – to commence 2019
Becker Law	Queensland Pathology Scholarship	PhD studies – commenced 2015
Andrew Mallett	Metro North Clinical Research Fellowship	Commencing 2019
Arti Raghubar	University of Queensland Postgraduate Scholarship	PhD studies – to commence 2019



## 2018 Research Awards and Achievements (cont)

Recipient	Award	Event
Cassandra Rawlings	RBWH Research Postgraduate Scholarship – renewal	PhD studies continuing part-time
Carla Scuderi	RBWH Research Postgraduate Scholarship – renewal	PhD studies continuing part-time

## 2018 Research Grants – Awarded

Investigators <i>(RBWH staff in bold)</i>	RBWH Research Groups/ Departments	Project Title	Granting Body	Amount in 2018	Total Amount <i>(years)</i>
Wendy Hoy, <b>Helen Healy</b> , Luke Connolly, Geoffrey Mitchell, Kate Panaretto, Zoltan Endre, Jeffrey Coombes, Glenda Gobe, <b>Ann Bonner</b> , Robert Fassett	CKD.Qld Collaborative	NHMRC Centre of Research Excellence – CKD.CRE	NHMRC APP1079502	\$499,396	\$2,496,981 (2014-2019)
Ha Dinh, <b>Ann Bonner</b>	Endeavour Research Fellowship	Health literacy, knowledge and self-management in comorbid chronic diseases	Endeavour	\$24,500	\$24,500 (2018)
<b>Andrew Kassianos</b> , <b>Helen Healy</b> , Ray Wilkinson, Leo Francis, Ross Francis	Conjoint Kidney Research Group	Pathogenic dendritic cells in human kidney disease	NHMRC APP1099222	\$125,000	\$370,983 (2016-2018)
<b>Katrina Kildey</b> , <b>Andrew Kassianos</b> , <b>Helen Healy</b> , Jacobus Ungerer, Sandra Klingberg, Brett McWhinney, George John, Ross Francis, Ray Wilkinson	Conjoint Kidney Research Laboratory	Natural killer cell subsets in kidney transplant rejection	Royal Brisbane and Women's Hospital Foundation	\$40,000	\$40,000 (2018)
Becker Law, <b>Helen Healy</b> , <b>Andrew Kassianos</b>	Conjoint Kidney Research Laboratory	Functional interactions between lymphocyte subsets and proximal epithelial cells in renal hypoxic injury and chronic kidney disease	Pathology Queensland – Study, Education and Research Committee	\$25,000	\$75,000 (2015-2018)
Melissa Little, Ian Smyth, Cas Simons, <b>Andrew Mallett</b> , Steven Alexander, Ernst Wovetang, A Oshlack, Chirag Patel, <b>Helen Healy</b> , Bruce Bennetts, Michel Tchan, Cathy Quinlan, Amanda Walker, S White, Z Stark	KidGen	Applying functional genomics to Kidney Disease	NHMRC APP1098654	\$409,772	\$1,229,316 (2016-2019)
<b>Andrew Mallett</b>	UQ IMB	HIDDEN Project Pilot Study	Royal Brisbane and Women's Hospital Foundation	\$40,000	\$40,000 (2018)
<b>Andrew Mallett</b>	UQ IMB	Translating Inherited Tubulointerstitial Disease in Australia	RACP Foundation Jacquot	\$90,000	\$90,000 (2018)
<b>Andrew Mallett</b>	KidGen	The HIDDEN (wHole genome Investigation to iDentify undetected Nephropathies) Project	AGHA Rare Disease Flagship	\$240,000	\$480,000 (2018-2020)
<b>Andrew Mallett</b>	KidGen	Evaluation of clinical genomics and a MDT clinic model in inherited kidney disease	AGHA Rare Disease Flagship	\$204,223.50	\$408,447 (2016-2018)
<b>Andrew Mallett</b> , <b>Helen Healy</b> , <b>Charles Denaro</b> , Wendy Hoy, Mark Thomas	CKD.Qld	aCQuiRE: Epidemiology of Fabry's disease in Queensland CKD patients stage 1-5D	Sanofi-Genzyme International	\$315,518	\$946,554 (2016-2019)
<b>Molly Milazi</b> , <b>Ann Bonner</b> , <b>Clint Douglas</b>	Professorial Nursing Unit Group	A novel bundled intervention (4Ds) to improve adherence with phosphate control in people receiving haemodialysis for end stage kidney disease	Royal Brisbane and Women's Hospital Research	\$18,431.50	\$36,863 (2018-2019)

## 2018 Research Grants – Awarded (cont)

Investigators (RBWH staff in bold)	RBWH Research Groups/ Departments	Project Title	Granting Body	Amount in 2018	Total Amount (years)
Arti Raghubar, <b>Andrew Mallett</b> , <b>Helen Healy</b> , <b>Andrew Kassianos</b>	Conjoint Kidney Research Laboratory	Investigating underlying molecular processes in IgA nephropathy cases using SWATH-MS	Pathology Queensland – Study, Education and Research Committee	\$20,000	\$20,000 (2018)
<b>Dwarakanathan Ranganathan</b> , <b>Nigel Mott</b>	Investigator initiated study – project grant	Radcath Study	Royal Brisbane and Women's Hospital Foundation	\$30,000.00	\$30,000.00 (2018)
<b>Dwarakanathan Ranganathan</b> , Sudha Ekambaram, Peter Trnka	International Society of Nephrology	The International Society of Nephrology Sister Centres Program nurtures a partnership between centres from low income countries and organisations from higher income countries to enhance practice of nephrology at the EC	ISN Asia Pacific Society of Nephrology	\$US12,000 = \$A16,405.35	\$24,000 (2018-2019)
<b>Jason Roberts</b> , <b>Dwarakanathan Ranganathan</b>	Investigator initiated study – project grant	Immunosuppressive Drugs in CRRT	Royal Brisbane and Women's Hospital Foundation	\$40,000.00	\$40,000.00 (2018)
<b>Carla Scuderi</b> , <b>George John</b> , Suzanne Parker, <b>Helen Healy</b> , Christine Staatz, <b>Jason Roberts</b>	Kidney Transplant Research Group	Innovative blood sampling to reduce the burden of long-term treatment for kidney transplant patients	Royal Brisbane and Women's Hospital Foundation	\$39,873	\$39,873 (2018)
Patsy Yates, Geoffrey Mitchell, D Currow, K Eagar, Helen Edwards, Glen Gardner, L Willmott, <b>Ann Bonner</b> , R Clark, j Tieman		NHMRC Centre of Research Excellence - End of Life Care	NHMRC APP1060254	\$499,108.50	\$2,495,543 (2013-2018)

## 2018 Research Publications

### Journal Articles:

- Alexander S, **John GT**, Korula A Et al. Protocol and rationale for the first South Asian 5-year prospective longitudinal observational cohort study and biomarker evaluation investigating the clinical course and risk profile of IgA nephropathy: GRACE IgANI cohort Wellcome Open Research 2018;3:91 doi:10.12688/wellcomeopenres.14644.1
- Bonner A**, Chambers S, **Healy H**, Hoy WE, Mitchell G, **Kark A**, **Ratanjee S**, Yates P. Tracking patients with advanced kidney disease in last 12 months of life. Journal of Renal Care 2018;44(2):115-122. doi:10.1111/jorc.12239
- Bonner A**, Gillespie K, Campbell KL, Coronas-Watkins K, Hayes B, Harvie B, Kelly JT, Havas K. Evaluating the prevalence and opportunity for technology use in chronic kidney disease patients: a cross-sectional study. BMC Nephrology 2018; doi:10.1186/s12882-018-0830-8
- Chambers S, **Healy H**, Hoy WE, **Kark A**, **Ratanjee S**, Mitchell G, Douglas C, Yates P, Bonner A. Health service utilization during the last year of life: a prospective, longitudinal study of the pathways of patients with chronic kidney disease stages 3-5. BMC Palliative Care 2018; 17:57-68
- Chan RJ, Marx W, Bradford N, Gordon L, **Bonner A**, Douglas C, Schmalkuche D, Yates Y. A systematic review of clinical, process and economic outcomes of nurse-led services in the ambulatory setting. International Journal of Nursing Studies 2018;81, 61-80. doi: 10.1016/j.ijnurstu.2018.02.002
- Chan S**, Cameron A, Wang Z, Venuthurupalli S, Tan K-S, **Healy H**, Hoy W. Body Mass index in an Australian population with chronic kidney disease. BMC Nephrology 2018;19:209
- Dinh T.T.H, **Bonner A**, Ramsbotham J, Clark R. Improving knowledge and self-care using teach-back method through a heart failure self-management program: a cluster randomized trial protocol. Nursing and Health Sciences, 2018;20(4):458-463. DOI: 10.1111/nhs.12534
- Douglas C**, Schmalkuche D, Nizette D, Yates P, **Bonner A**. Nurse-led services in Queensland: a scoping study. Collegian 2018; doi: 10.1016/j.colagn.2017.10.011
- Forbes TA, Howden S, Lawlor K, Phipson B, Maksimovic J, Hale L, Wilson S, Quinlan C, Ho G, Holman K, Bennetts B, Crawford J, Trnka P, Oschlack A, Patel C, **Mallett A**, Simons C, Little M. Patient iPSC-derived kidney organoids show functional validation of a ciliopathic renal phenotype and reveal underlying pathogenetic mechanisms. American Journal of Human Genetics
- Gois P**, **Wolley M**, **Ranganathan D**, Seguro A. Vitamin D deficiency in chronic kidney disease: Recent evidence and controversies. International Journal of Environmental Research and Public Health. 2018. Aug 17;15(8)
- Guo Z, Poglitsch M, McWhinney B, **Ungerer J**, Ahmed A, Gordon R, **Wolley M**, Stowasser M. Aldosterone LC-MS/MS Assay-Specific Threshold Values in Screening and Confirmatory Testing for Primary Aldosteronism. The Journal of Clinical Endocrinology and Metabolism, 2018 Nov 1;103(11) 3965-3973. doi: 10.1210/jc.2018-01041

### Journal Articles: (cont):

12. Havas K, **Douglas C, Bonner A**. Meeting patients where they are: Improving outcomes in early chronic kidney disease with tailored self-management support (the CKD-SMS study). *BMC Nephrology*, 2018;19:279. DOI:10.1186/s12882-018-1075-2
13. Hoang LV, Green T, **Bonner A**. Informal caregivers' experiences of caring for people receiving dialysis: A mixed-methods systematic review. *Journal of Renal Care* 2018;44(2):82-95. doi:10.1111/jorc.12235
14. **Kilday K**, Law B, Muczynski K, Wilkinson R, **Healy H, Kassianos A**. Identification of leukocyte subpopulations in human kidneys by flow cytometry. *Bio-protocol* 2018;8(16): e2980. doi: 10.21769/BioProtoc.2980
15. **Milazi M, Douglas C, Bonner A**. A bundled phosphate control intervention (4Ds) for adults with end stage kidney disease receiving haemodialysis: a cluster randomised controlled trial protocol. *Journal of Advanced Nursing*, 2018;74(10):2431-2241. DOI:10.1111/jan.13774
16. Mohapatra A, Valson AT, Gopal B, Singh S, Nair SC, Viswabandya A, Varughese S, Tamilarasi V, **John GT**. Hemostatic Abnormalities in Severe Renal Failure: Do They Bark or Bite? *Indian J Nephrol* 2018 Mar-Apr;28(2):135-142. doi: 10.4103/ijn.IJN\_104\_17 (International Collaboration)
17. Mohapatra A, Kakde S, Annapandian VM, Valson AT, Duhli N, Korula A, Matthai SM, Pulimood AB, David VG, Alexander S, Jacob S, Varughese S, Basu G, Tamilarasi V, John GT. Spectrum of biopsy proven renal disease in South Asian children: two decades at a tropical tertiary care centre. *Nephrology* 2018; Nov;23(11):1013-1022. doi:10.1111/nep.13160. PMID: 28846194
18. **Purtell L**, Sowa M, **Berquier I, Scuderi C, Douglas C, Taylor B**, Kramer K, Hoy W, Healy H\*, **Bonner A\***. The Kidney Supportive Care program: Characteristics of patients referred to a new model of care for advanced chronic kidney disease. *BMJ Supportive and Palliative Care* 2018; doi:10.1136/bmjspcare-2018-001630. \* equal last authors
19. **Scuderi C, Berquier I, Purtell L, Douglas C, Healy H, Bonner A**. Complex prescribing in chronic kidney disease: the role of the renal pharmacist in Kidney Supportive Care uncovering hydralazine-related lupus. *Journal of Pharmacy Practice and Research* 2018; doi:10.1002/jppr.1520
20. **Scuderi C**, Pain T. Using confidence assessment to explore physiotherapists, dieticians, speech pathologists and occupational therapist's knowledge of medicines. *Journal of Interprofessional Care*. 2018 <https://doi.org/10.1080/13561820.2018.1551860>
21. Stowasser M, Ahmed A, Cowley C, **Wolley M**, Guo Zeng, **McWhinney B, Ungerer J**, Gordon R. Comparison of seated with recumbent saline suppression testing for the diagnosis of primary aldosteronism. *The Journal of Clinical Endocrinology and Metabolism*, 2018 Nov 1. 103(11):4113-4124. doi: 10.1210/jc.2018-01394
22. Venuthurupalli K, Hoy WE, **Healy HG**, Cameron A, Fassett R. CKD screening and surveillance in Australia: past, present and future. *Kidney International Reports* 2018; 3:36-46
23. **Wilson G, Franca-Gois P**, Zhang A, Wang X, Law B, **Kassianos A, Healy H**. The role of oxidative stress and inflammation in acute oxalate nephropathy associated with ethylene glycol intoxication. *Kidney International Reports*, *Kidney International Reports* 2018;3(5):1217
24. **Wolley M**, Jardin, M, Hutchison C. Exploring the clinical relevance of providing increased removal of large middle-molecules by haemodialysis. *Clinical Journal of the American Society of Nephrology*. 2018 May 7;13(5)
25. **Wolley M**, Hutchison C. Large Uremic Toxins: An unsolved problem in ESRD. *Nephrology, Dialysis and Transplantation*. 2018 Oct 1; 33(suppl\_3): iii6-iii11. doi: 10.1093/ndt/gfy179.

### Book Chapters / Letters:

1. **Bonner A**, Douglas B. (2018). Chronic kidney disease. In E. Chang & A. Johnson (Eds). *Chronic Illness and Disability: Principles of Nursing Practice*. (3<sup>rd</sup> ed.). (pp. 392-408). Sydney: Elsevier
2. Hryciw D, **Bonner A**. (2018). Fluids and electrolytes, acids and bases. In J. Craft, C. Gordon, S. E., Huether, K. L. McCance, & V. L. Brashers. (Eds). *Understanding Pathophysiology*. (3<sup>rd</sup> ed.). pp. 882-910. Elsevier: Sydney. ISBN: 9780729542647
3. Hryciw D, **Bonner A**. (2018). Alterations of renal and urinary tract function across the lifespan. In J. Craft, C. Gordon, S. E., Huether, K. L. McCance, & V. L. Brashers. (Eds). *Understanding Pathophysiology*. (3<sup>rd</sup> ed.). pp. 911-946. Elsevier: Sydney. ISBN: 9780729542647.

## 2018 Conference Presentations – Invited Speaker, Oral and Poster

### Invited Speaker:

1. **Ann Bonner**. How do we relieve uraemic symptoms. Professional Society for Nephrological Nurses annual conference, 4-5 October, Aarhus, Copenhagen
2. **Ann Bonner** Calcium phosphate what works. Professional Society for Nephrological Nurses annual conference, 4-5 October, Aarhus, Copenhagen
3. **Healy H**. Fabry's in the Kidney – the aCQUIRE Study. International Conference on Fabry Disease. 2018, August 26, Osaka, Japan
4. **Healy H**. It's all about integrated care – the picture of kidney disease in our community. Brisbane Diamantia Health Partners Chronic Theme Disease Forum, 2018, June 15, Brisbane, Australia
5. **Healy H**. PUZ019 Graduate Certificate in Health Service Innovation - Implementation Science: Theory and Practice in Health. 2018 March, Royal Brisbane and Women's Hospital, Brisbane Australia
6. **John G**. International Congress of the Transplant Society. 2018 June – July, Madrid, Spain
7. **John G**. Continuing Medical Education Session in Renal Transplantation, 2018 May, India
8. **Mallett A**. CSIRO eHealth Colloquium, 2018, May, Brisbane, Australia
9. **Mallett A**. ANZSN Basic Course, 2018 April, Auckland, New Zealand
10. **Mallett A**. AAHMS QLD Clinical Science Symposium, 2018 March, Brisbane, Australia

### Invited Speaker: (cont):

11. **Ranganathan D.** Plasma Exchange in Renal disorder, 2018, Feb, Dr DY Patil Medical College, Pune, India
12. **Ranganathan D.** Home Haemodialysis - Pune Society of Nephrology, 2018, Feb, Pune, India.

### Oral Presentations:

1. Adegbija O, Cameron A, Hoffman D, Segelov D, Freeman T, Waugh D, **Huynh S**, Hoy WE. Profile of patients in a renal specialty practice in metropolitan Sydney, utilising Audit 4. In: Nephrology 018;23(S3):25. Oral presented at: 54<sup>th</sup> Annual Scientific Meeting Australian and New Zealand Society of Nephrology. 8-12 September 2018; Sydney, Australia
2. Adegbija O, Hoy WE, Wang Z, Cameron A, **Healy HG**, Tan KS, Venuthurupalli SK., Chronic kidney disease is not characterised solely by those starting renal replacement therapy. In: Nephrology 2018;23(S3):24. Oral presented at: 54<sup>th</sup> Annual Scientific Meeting Australian and New Zealand Society of Nephrology. 8-12 September 2018; Sydney Australia
3. **Arndt A, Angus S.** Who cares? We do. Paper presented at Renal Society of Australasia, 46<sup>th</sup> annual conference, 21-23 June 2018, Adelaide Australia
4. **Berquier I, Bonner A, Purtell L, Douglas C, Healy H.** Kidney supportive care: an alternative pathway of care. Paper presented at the 7<sup>th</sup> Palliative Care Nursing Association Conference, 20-21 May 2018, Brisbane Australia
5. **Berquier I, Bonner A, Healy H, Purtell L.** Kidney Supportive Care: Does it meet patient and carer needs? Paper presented at Renal Society of Australasia, 46<sup>th</sup> annual conference, 21-23 June 2018, Adelaide Australia
6. **Bonner A, Berquier I, Healy H, Purtell L.** Making decisions and preparing advance care plans: outcomes from a Kidney Supportive Care program. Paper presented at Renal Society of Australasia, 46<sup>th</sup> annual conference, 21-23 June 2018, Adelaide Australia
7. **Bonner A, Purtell L, Berquier I, Healy H.** Characteristics of Indigenous Australians who attend a kidney supportive care program. Paper presented at Renal Society of Australasia, 46<sup>th</sup> annual conference, 21-23 June 2018, Adelaide Australia
8. **Bonner A, Stone C, Abel J, Barnes M, Havas K, Tam V, Mills K, Douglas, C.** Chronic Disease Multi-Morbidity: Nurse Practitioners Reforming Health Care Delivery in Australia. Paper presented at Sigma Theta Tau International's 29<sup>th</sup> International Nursing Research Congress, 19-23 July 2018, Melbourne
9. **Bublitz L, Hiremagalar B, Purtell L, Gillespie K, Sowa M, Bonner A.** Tracking patient-reported symptoms in people undergoing dialysis: the LEOPARD study. Paper presented at Renal Society of Australasia, 46<sup>th</sup> annual conference, 21-23 June 2018, Adelaide Australia
10. **Healy HG, Law B, Wang X, Kilday K, Giuliani B, Beagley K, Wilkinson R, Kassianos A.** Tissue-resident mucosal-associated invariant T (MAIT) cells in human renal fibrosis and chronic kidney disease. In: Nephrology 2018;23(S3):22. Paper presented at: 54<sup>th</sup> Annual Scientific Meeting Australian and New Zealand Society of Nephrology. 8-12 September 2018; Sydney, Australia
11. **Healy, H., Odewumi, A.** CKD. QLD / CRE, Profile of patients in a renal specialty practice in metropolitan Sydney, utilising Audit 4: are they different? Oral presented at: 54<sup>th</sup> Annual Scientific Meeting Australian and New Zealand Society of Nephrology. 8-12 September 2018; Sydney, Australia
12. **Hoang VL, Bonner A, Green T.** Social support, depression and quality of life among people receiving haemodialysis in Vietnam. Paper presented at: 54<sup>th</sup> Annual Scientific Meeting Australian and New Zealand Society of Nephrology. 8-12 September 2018; Sydney, Australia
13. **Hoy WE, Zhang J, Wang Z, Cameron A, Healy HG, Venuthurupalli S, Tan K-S, Govindarajulu S, Rolfe A, Mantha M, Titus T, Cherian R, Wu P, Banney C, Mutatiri C, Madhan K, Ranganathan D, Kan G, Han T, Hossain S, Kark A, Coleman S, Taylor B, Mallett AJ.** The end of the CKD journey – RRT or death without RRT: the CKD.QLD experience. In: Nephrology 2018;23(S3):50. Paper presented at: 54<sup>th</sup> Annual Scientific Meeting Australian and New Zealand Society of Nephrology. 8-12 September 2018; Sydney, Australia
14. **Jeyaruban A, Hoy WE, Cameron A, Healy HG, Zhang J, Mallett AJ.** Factors that influence hospitalisations in patients with chronic kidney disease. In: Nephrology 2018;23(S3):49. Paper presented at: 54<sup>th</sup> Annual Scientific Meeting Australian and New Zealand Society of Nephrology. 8-12 September 2018; Sydney, Australia
15. **Jeyaruban A, Hoy WE, Cameron A, Healy HG, Zhang J, Mallett AJ.** Assessing the impact of hyperuricaemia, gout and allopurinol treatment on progression of renal function in patients with chronic kidney disease. In: Nephrology 2018;23(S3):61. Paper presented at: 54<sup>th</sup> Annual Scientific Meeting Australian and New Zealand Society of Nephrology. 8-12 September 2018; Sydney, Australia
16. **Jeyaruban A, Hoy WE, Cameron A, Healy HG, Zhang J, Mallett AJ.** Cardiovascular events do not accelerate decline of renal function in patients with chronic kidney disease. In: Nephrology 2018;23(S3):44. Paper presented at: 54<sup>th</sup> Annual Scientific Meeting Australian and New Zealand Society of Nephrology. 8-12 September 2018; Sydney, Australia
17. **Jeyaruban A, Hoy WE, Cameron A, Healy HG, Zhang J, Mallett AJ.** Cardiovascular events increase the risk of mortality in patients with chronic kidney disease. In: Nephrology 2018;23(S3):43. Paper presented at: 54<sup>th</sup> Annual Scientific Meeting Australian and New Zealand Society of Nephrology. 8-12 September 2018; Sydney, Australia
18. **Jeyaruban A, Hoy WE, Cameron A, Healy HG, Zhang J, Mallett AJ.** Does the type of intervention for ischaemic heart disease impact on mortality and morbidity in patients with chronic kidney disease. In: Nephrology 2018;23(S3):44. Paper presented at: 54<sup>th</sup> Annual Scientific Meeting Australian and New Zealand Society of Nephrology. 8-12 September 2018; Sydney, Australia
19. **Mallet A, Cameron, A., Hoy, W.** CKD. QLD / CRE, Chronic Kidney Disease patients with autosomal dominant Polycystic Kidney Disease or other inheritable Kidney disease have distinct Characteristics and higher associated healthcare. Paper presented at: 54<sup>th</sup> Annual Scientific Meeting Australian and New Zealand Society of Nephrology. 8-12 September 2018; Sydney, Australia
20. **McIntyre D, Coyer F, Bonner A.** Developing specific haemodialysis nurse sensitive indicators: Results from a Delphi study. Paper presented at Renal Society of Australasia, 46<sup>th</sup> annual conference, 21-23 June 2018, Adelaide Australia
21. **Milazi M, Bonner A, Douglas C.** A cluster randomised control trial study protocol to improve phosphate control in adults receiving haemodialysis. Paper presented at 47<sup>th</sup> EDTNA/ERCA International Conference, 15-18 September 2018; Genoa, Italy
22. **Milazi M, Bonner A, Douglas C.** Nurse-led teach back intervention to improve adherence with phosphate control in people receiving haemodialysis. Paper presented at 47<sup>th</sup> EDTNA/ERCA International Conference, 15-18 September 2018; Genoa, Italy
23. **Milazi M, Bonner A, Douglas C.** Educational interventions for phosphate control in patients receiving haemodialysis: a systematic review and meta-analysis. Paper presented at 47<sup>th</sup> EDTNA/ERCA International Conference, 15-18 September 2018; Genoa, Italy



### Oral Presentations: (cont):

24. Nguyen NT, **Bonner A, Douglas C.** Does a chronic kidney self-management education support to improve self-efficacy, quality of life, and blood pressure: Results from a randomised control trial, Paper presented at Renal Society of Australasia, 46<sup>th</sup> annual conference, 21-23 June 2018, Adelaide Australia
25. Nguyen NT, **Bonner A, Douglas C.** A randomised control trial of a chronic kidney disease self-management intervention on patient knowledge and self-management behaviour. Paper presented at Renal Society of Australasia, 46<sup>th</sup> annual conference, 21-23 June 2018, Adelaide Australia
26. Olenski S., **Scuderi C,** Jeyaseelan L, **John G.** Clinical audit of urinary tract infections in renal transplant patients at the Royal Brisbane and Women's Hospital. In: *Nephrology* 2018;23(S3):19. Paper presented at: 54<sup>th</sup> Annual Scientific Meeting Australian and New Zealand Society of Nephrology. 8-12 September 2018; Sydney, Australia
27. Owens EP, Edey DP, **Healy H,** Tan KS, Hoy WE, Gobe GC. The chronic kidney disease biobank, open for business. Paper presented at: *Nephrology: from the Laboratory to the Clinic.* 6-8 December 2018, Bienheim New Zealand
28. **Purtell L, Bonner A, Healy HG.** Younger adults also require kidney supportive care. In: *Nephrology* 2018;23(S3):52. Paper presented at: 54<sup>th</sup> Annual Scientific Meeting Australian and New Zealand Society of Nephrology. 8-12 September 2018; Sydney, Australia
29. **Purtell L, Healy HG, Bonner A.** Evaluating and optimising the delivery of kidney supportive care. In: *Nephrology* 2018;23(S3):51. Paper presented at: 54<sup>th</sup> Annual Scientific Meeting Australian and New Zealand Society of Nephrology. 8-12 September 2018; Sydney, Australia
30. **Purtell L.** Hiremagalur B, Sowa M, Bublitz L, **Bonner A.** CKD.QLD / CRE, Predicting Improvement in Health – Related Quality of Life in people receiving dialysis: The leopard Study. Paper presented at: 54<sup>th</sup> Annual Scientific Meeting Australian and New Zealand Society of Nephrology. 8-12 September 2018; Sydney, Australia
31. Raghubar A, Wang X, **Kassianos AJ,** Ng MS, Dave KA, Norris E, Headlam MJ, **Healy HG,** Mallett AJ. Micro proteomic profiling in the diagnosis of kidney disease. In: *Nephrology* 2018;23(S3):23. Paper presented at: 54<sup>th</sup> Annual Scientific Meeting Australian and New Zealand Society of Nephrology. 8-12 September 2018; Sydney, Australia
32. Ramsbotham J, Dinh TTH, Truong H, **Bonner A.** Vietnamese Nursing Students' perspectives on learning environments: a multi-site benchmarking study to inform future initiatives. Paper presented at the Nursing Education Research Conference, 19-21 April 2018, Washington, USA
33. Sowa PM, Zhang J, Cameron A, **Healy HG,** Hoy WE, Connelly LB. Chronic Kidney Disease: who are the high cost users of hospital care? In: *Nephrology* 2018;23(S3):51. Paper presented at: 54<sup>th</sup> Annual Scientific Meeting Australian and New Zealand Society of Nephrology. 8-12 September 2018; Sydney, Australia
34. Stowasser M, Ahmed A, Cowley D, **Wolley M,** McWhinney B, Ungerer J, Gordon R. Seated Saline Suppression testing for the diagnosis of Primary Aldosteronism – a validation Study. Oral at International Society of Hypertension Annual Scientific Meeting 2018 Beijing
35. Venuthurupalli SK, Gupta A. Lee A, Mahmood U, Govindarajulu S, **Healy HG,** Fassett R, Cameron A, Hoy WE. CKD.QLD: profile and long-term outcomes of Aboriginal and Torres Strait Islander (A&TSI) people with chronic kidney disease (CKD) from Darling Downs, Queensland. In: *Nephrology* 2018;23(S3):32. Paper presented at: 54<sup>th</sup> Annual Scientific Meeting Australian and New Zealand Society of Nephrology. 8-12 September 2018; Sydney, Australia
36. **Wolley. M.,** Ahmed AH, Cowley D, Gordon RD, McWhinney BC, Ungerer JP, Stowasser M. Seated saline suppression testing for the diagnosis of primary aldosteronism. International Aldosterone conference 2018. Chicago. USA
37. Zhang H, **Scuderi C,** Eglinton J, **Broadbent T,** Jones S, **Mallett, A.** (2018). Sensipar<sup>®</sup> instead of surgery: Is it a sensible option? Paper presented at Renal Society of Australasia, 46<sup>th</sup> annual conference, 21-23 June 2018, Adelaide Australia
38. Zhang J, Hoy WE, **Baboolal K,** Wang Z, Cameron A, **Healy HG,** Venuthurupalli S, Tan K-S, Govindarajulu S, Rolfe A, Mantha M, Titus T, Cherian R, Wu P-C, Banney C, Mutatiri C, Madhan K, Ranganathan D, Kan G, Han T, Hossain S, **Kark A, Coleman S, Taylor B, Mallett AJ.** Acute kidney injury in patients with chronic kidney disease in public nephrology practices in Queensland. In: *Nephrology* 2018;23(S3):69. Paper presented at: 54<sup>th</sup> Annual Scientific Meeting Australian and New Zealand Society of Nephrology. 8-12 September 2018; Sydney, Australia.

### Poster Presentations:

1. **Arndt A, Angus S.** Transition unit Nursing model. Poster presented at Renal Society of Australasia, 46<sup>th</sup> annual conference, 21-23 June 2018, Adelaide Australia
2. **Berquier I, Bonner A, Purtell L, Healy H, Taylor B, Heffernan D, Douglas C.** Kidney supportive care Development of an advanced practice nurse. Poster presented at the 7<sup>th</sup> Palliative Care Nursing Association Conference, 20-21 May 2018, Brisbane Australia
3. Dinh TTH, **Bonner A,** Ramsbotham J, Clark RA Jones L. Validation of the Dutch heart failure scale: Results from factor analyses. Poster presented at the Australian Cardiovascular Nursing College Conference, 9-10 March 2018, Sydney Australia
4. Guo Z, Poglitsch M, McWhinney B, Ungerer J, Ahmed A, Gordon R, **Wolley M,** Stowasser M Measurement of aldosterone; comparison of liquid chromatography-tandem mass spectrometry with radioimmunoassay in screening and confirmatory testing for primary aldosteronism. Poster at International Society of Hypertension Annual Scientific Meeting 2018 Beijing.
5. Guo Z, Poglitsch M, McWhinney B, Ungerer J, Ahmed A, Gordon R, **Wolley M,** Stowasser M, Application of a novel equilibrium angiotensin II assay in screening and confirmatory testing for primary aldosteronism: a pilot study. Poster at International Society of Hypertension Annual Scientific Meeting 2018 Beijing
6. **Healy HG,** Law B, Wang X, Kildey K, Giuliani K, Beagley K, Wilkinson R, Kassianos A. Tissue-resident mucosal-associated invariant T (MAIT) cells in human renal fibrosis and chronic kidney disease. In: *Journal of the American Society of Nephrology Supplement* 2018;29;366. Poster presented at: Kidney Week American Society of Nephrology, 23-28 October 2018; San Diego, US. (TH-PO953)
7. Hoang VL, **Bonner A, Green T.** Exploration of social support for people receiving haemodialysis in Vietnam: a study overview. Poster presented at Renal Society of Australasia, 46<sup>th</sup> annual conference, 21-23 June 2018, Adelaide Australia
8. Hoy AJ, Zhang J, Wang Z, Cameron A, **Healy HG, Mallett AJ,** Venuthurupalli SK. The end of the CKD journey – who starts renal replacement therapy and who dies without it among CKD patients in public renal specialty practices in Queensland, Australia. In: *Journal of the American Society of Nephrology Supplement* 2018;29;485. Published at Kidney Week American Society of Nephrology, October 23-28 October 2018; San Diego, US. (FR-PO252)



## Poster Presentations (cont):

- Hoy AJ, Zhang J, Wang Z, Cameron A, **Healy HG**, Venuthurupalli SK, **Mallett AJ**. Frequency and consequences of AKI in patients with CKD in public nephrology practices in Queensland, Australia. In: Journal of the American Society of Nephrology Supplement 2018;29;117. Poster presented at: Kidney Week American Society of Nephrology, 23-28 October 2018; San Diego, US. (TH-PO026)
- Ironside D**, **Scuderi C**, Eglington J, **Rice M**, **Millhouse S**, **Kark A**. Case series: hypocalcaemia requiring hospitalisation following administration of denosumab in chronic kidney disease (CKD) patients: Medicines Management 2018. 2018 November 22-25; Brisbane
- Law B, Wilkinson R, Wang X, Kildey K, Giuliani K, Beagley K, **Healy H**, **Kassianos A**. Development of tissue-resident mucosa-associated invariant T (MAIT) cells in human renal fibrosis and chronic kidney disease (CKD). Poster at: 5<sup>th</sup> European Congress of Immunology. 2-5 September 2018, Amsterdam, Holland. (P.C1.07.09)
- Mallett AJ**, **Jeyaruban A**, Cameron A, Zhang J, **Healy HG**, Hoy WE. Impact of cardiovascular events on mortality and decline of renal function in patients with CKD. In: Journal of the American Society of Nephrology Supplement 2018;29;233. Poster presented at: Kidney Week American Society of Nephrology, 23-28 October 2018; San Diego, US (TH-PO447)
- Mallett AJ**, **Jeyaruban A**, Cameron A, Zhang J, **Healy HG**, Hoy WE. Determining the association of allopurinol prescription on progression of renal dysfunction and progression to renal replacement therapy in patients with CKD. In: Journal of the American Society of Nephrology Supplement 2018;29;462. Poster presented at: Kidney Week American Society of Nephrology, 23-28 October 2018; San Diego, US (FR-PO167)
- Mallett AJ**, Wilkins EJ, Broughtwood T, Simons C, McCarthy H, Mallawaarachchi A, Faull R, Smyth I, **Healy HG**, Little MH, Wardrop L, Quinlan C, Stark Z, Patel C, Goranitis I, Chakera A, Best S, Long JC, Jose M. Evaluating an Australian national network of multidisciplinary renal genetics clinics: the KidGen collaborative. Information Poster presented at: Kidney Week American Society of Nephrology, 23-28 October 2018; San Diego, US (INFO 19)
- Raghubar A, Wang X, **Kassianos AJ**, Ng MSY, Dave KA, Norris EL, Headlam MJ, Healy H, Mallett AJ. Application of mass spectrometry-based micro-proteomics in IgA Nephropathy. Eposter at: 15<sup>th</sup> International Symposium on IgA Nephropathy – IIGAN 2018. 27-29 September 2018; Buenos Aires, Brazil
- Ramsbotham J, Dinh TTH, Truong H, **Bonner A**. Translation and Psychometric evaluation of the Vietnamese Clinical Learning Environment Inventory with nursing students. Poster presented at the Nursing Education Research Conference, 19-21 April 2018, Washington, USA
- Rice M**, Goie H, **Scuderi C**, **Ironside D**, **Zipf J**. Proton pump inhibitor use and chronic kidney disease- a clinical audit.: Medicines Management 2018. 2018 November 22-25; Brisbane
- Scuderi C**, Olenski S, **John G**, Choo A, Singh A, Way M, Jeyaseelan L. Clinical audit of urinary tract infections in renal transplant patients. Poster at: Medicines Management 2018. 2018 November 22-25; Brisbane
- Williams N**. An efficacy and feasibility study comparing topical use of acetic acid at the exit site versus mupirocin to prevent exit site infection in PD patients (ACES Study). Poster presented at Home Therapies Conference, 2018, New Zealand
- Wolley M**, Hawley C, Marshall M, Roberts M. Incremental and Twice Weekly Hemodialysis in Australia and New Zealand. Poster at Kidney Week American Society of Nephrology, 23-28 October 2018; San Diego, US (TH-PO339)
- Wu A, **Wolley M**, Cowley D, Gordon R, Fenton R, Stowasser M. Exogenous Mineralocorticoid Administration and Acute Salt Loading Effects on NCC Expression and Activity in Hypertensives with Raised Aldosterone/Renin Ratio (ARR). Poster at Kidney Week American Society of Nephrology, 23-28 October 2018; San Diego, US (FR-PO320)
- Wu A, **Wolley M**, Xu S, Gordon R, Fenton R, Stowasser M. Variations in abundance of urinary exosomal renal sodium transporters in response to mineralocorticoid administration and oral salt loading and in relation to baseline plasma aldosterone and potassium. Poster at International Society of Hypertension Annual Scientific Meeting 2018 Beijing.

## Other Communications and Outputs:

### Symposiums:

- Healy H**, **Baboolal K**. Metro North Kidney Health Service Discrete Event Simulation Modelling, 2018, RBWH
- Berquier I**, **Douglas C**, **Scuderi C**, **Bonner A**, **Heffernan D**, **Purtell L**, **Healy H**. Kidney Supportive Care Symposium, 2018, RBWH
- Baboolal K**, **Mallett A**, **Berquier I**, **Rice M**, Hoy W, Cameron A, **Healy H**. Statewide Renal Clinical Network Forum – Renal Service: Putting Consumers First, Queensland State Library, 2018. Brisbane, QLD.

### Academic Appointments 2018

- Assoc Prof Helen Healy** – Associate Professor, University of Queensland, Faculty of Medicine
- Assoc Prof Andrew Mallett** – Associate Professor, University of Queensland Faculty of Medicine
- Assoc Prof Andrew Mallett** – Inaugural Clinical Fellow, UQ Institute for Molecular Bioscience
- Assoc Prof Andrew Mallett** – Honorary Fellow Manager Murdoch Children’s Research Institute
- Assoc Prof Andrew Mallett** – Visiting Fellow, University of Cambridge School of Medicine, Addenbrooke’s Hospital (CUH NHS Trust) and Cambridge Institute for Medical Research
- Ms Carla Scuderi** – Course Coordinator University of Qld Clinical Pharmacy Post graduate program
- Assoc Prof Dwarakanathan Ranganathan** – School of Medicine, Griffith University
- Dr Martin Wolley** – Senior Lecturer, University of Queensland, Faculty of Medicine.

### Conference Abstract, Peer Review Panels and Meetings:

1. **Prof Ann Bonner** – Reviewer GRANTS – NHMRC, NMRC (Singapore), IHBI
2. **Prof Ann Bonner** – Assoc Editor – Renal Society of Australasia journal; Editorial Board – Journal of Renal Care
3. **Prof Ann Bonner** – Reviewer MANUSCRIPTS – American Journal of Kidney Disease, BMC Nephrology, BMC Health Services, International Journal of Nursing Studies, Journal of Advanced Nursing, Journal of Clinical Nursing, Journal of Renal Care, International Journal of Nursing Practice, Social Science & Medicine
4. **Prof Ann Bonner** – Reviewer MEETING ABSTRACTS – Renal Society of Australasia, Transplant Society, Australian College of Nursing
5. **Assoc Prof Helen Healy** – Sub Editor – Frontiers in Physiology – Renal and Epithelial Physiology, Case Reports in Nephrology
6. **Assoc Prof Helen Healy** – Reviewer MANUSCRIPTS – Internal Medicine
7. **Assoc Prof Helen Healy** – Reviewer GRANTS – NHMRC, RBWH & Foundation Research Council scholarships and project grants
8. **Assoc Prof Helen Healy** – Reviewer MEETING ABSTRACTS – Australian and New Zealand Society of Nephrology Annual Scientific Meeting
9. **Assoc Prof Helen Healy** – Reviewer OTHER – MN Research Excellence Awards
10. **Dr Helen Healy** – Royal Brisbane and Women’s Hospital Annual Healthcare Symposium
11. **Ms Carla Scuderi** – Society of Hospital Pharmacists MM2018.

### Kidney Health Service International Visiting Academics:

Visiting Academic	Hosted By	Event	Visiting Academic’s Institute
Professor Adeera Leevin	Healy H. Kidney Health Service Baboolal K. Statewide Renal Network	Site Visit and Presentation to Kidney Health Service Heads of Departments	Executive Director of the British Columbia Renal Agency, Director Division of Nephrology, St Paul’s Hospital, Vancouver, Canada
Professor Christian Kurts	Healy H. Kassianos A. Conjoint Kidney Research Laboratory, Chemical Pathology, Queensland Pathology	QIMR Immunology and Infectious Disease Seminar	Director and Group Leader, Institute of Experimental Immunology, Bonn, Germany
Professor Fliss Murtagh	Healy H. Kidney Health Service, Berquier I. Kidney Supportive Care, Bonner A. Professorial Nursing Unit	Key Note Speaker: Kidney Supportive Care Symposium	Professor in Palliative Care Hull York Medical School, Associate Director Wolfson Centre for Palliative Care Research University of Hull, Visiting Professor of Palliative Care King’s College London
Professor Futoshi Iwata	Healy H. Kidney Health Service, Berquier I. Kidney Supportive Care	Kidney Supportive Care Think Tank	Professor of Law, Sophia University Tokyo Japan
Professor Agnes Fogo	Healy H, Kidney Health Service	Invited Lecturer, Royal Brisbane Hospital Medical Ground Rounds	John L Shapiro Professor of Pathology, Director Renal Pathology/EM Laboratory Vanderbilt University Medical Centre Nashville USA

### International Sister Sites:

International Society of Nephrology Level B sponsorship - Dr Sudha Ekambaram (EC), Mehta Multispecialty Hospital, Chennai, India and Dwarakanathan Ranganathan (SC), Dr Peter Trmka(SC) - US\$ 12000 pa for years 2018 and 2019.

## Neurology – Epilepsy

The RBWH Epilepsy group has been active in several areas of research in 2017. This includes epilepsy in pregnancy, genetic studies and functional MRI. Our research has included studies of humans and animal models of epilepsy, and promising new treatments including intravenous immunoglobulin and cannabidiol gel.

### Supervised Post-Graduate Research Students

Name <i>(RBWH staff in bold)</i>	Current Studies <i>(e.g. PhD, Masters etc.)</i>	University <i>(duration)</i>	Supervisors <i>(RBWH staff in bold)</i>
Javier Urriola	PhD		David Reutens
Ruben Pellicer-Guridi	PhD		David Reutens
Jiasheng Su	PhD		David Reutens
Surabhi Sood	PhD		David Reutens
Sharhzad Bagheri	PhD		David Reutens
Peter Caradonna	PhD		David Reutens
Shaez Abdulla	PhD		David Reutens
Zahid Kausar	PhD		David Reutens
Zheng Qiao	PhD		David Reutens

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

Name	Type of Fellowship	Research Program	University <i>(years)</i>
Kimberley Irwin	Research Trial Coordinator	Clinical Trials	UQ
Leanne Rigby	Research Officer	Clinical Trials	UQ
Yvonne Gautam	Research Officer	Drug Registry	UQ
Maryam Ziaei	Post-doctoral Fellow	Neuroimaging	UQ
Min Chen	Post-doctoral Fellow	Neuroimaging	UQ
Stephen Walsh	Epilepsy Fellow	Epilepsy	Qld Health
Michael Vogel	Post-doctoral Fellow	Neuroimaging	UQ
Reuben Pellicer	Post-doctoral Fellow	Neuroimaging	UQ
Jaixin Du	Post-doctoral Fellow	Neuroimaging	UQ

### 2018 Current RBWH Research Group / Department Led Research Activity

RBWH Research Group/Department Lead Researchers	Collaborative Researchers	Research Project Title
Lata Vadlamudi	Jeffrey Craig	Combining genetic and epigenetic analyses to generate biomarkers for epilepsy in twins and singletons

## 2018 Collaborative Research Activity involving RBWH Research Group / Department

Collaborative Lead Researchers	RBWH Researchers	Research Project Title
Prof T O'Brien (Melbourne Health)	Professor David Reutens	A Phase 2A, Randomized, Double-Blind, Placebo-Controlled, Multi-Center, Multiple-Dose Study to Assess the Safety and Efficacy of ZYN002 Administered as a Transdermal Gel to Patients with Partial Onset Seizures Synthetic Transdermal Cannabidiol for the Treatment of Epilepsy (STAR 1)
Prof T O'Brien (Melbourne Health)	Professor David Reutens	Open Label Extension Study to ZYN2-CL-03 to Assess the Long-Term Safety and Efficacy of ZYN002 Administered as a Transdermal Gel to Patients with Partial Onset Seizures (STAR 2)
Dr. Eva Pietras (SK Life Sciences)	Professor David Reutens	An Open Label, Multicenter, Safety and Pharmacokinetic Study of YKP3089 as Adjunctive Therapy in Subjects with Partial Onset Seizures
Prof T O'Brien (Melbourne Health)	Professor David Reutens	A double-blind, randomized, placebo-controlled study to investigate the efficacy and safety of cannabidiol (GWP42003-P, CBD) as add-on therapy in patients with tuberous sclerosis complex who experience inadequately-controlled seizures
Prof T O'Brien (Melbourne Health)	Professor David Reutens	A Multicenter, Double-Blind, Randomized, Placebo-Controlled Trial with an Open-Label Extension Phase of Perampanel as Adjunctive Treatment in Subjects at Least 2 years of Age With Inadequately Controlled Seizures Associated With Lennox-Gastaut Syndrome
Prof. David Reutens	Professor David Reutens	Observational phase IV Clinical Registry of the use of perampanel (Fycompa) for the treatment of focal and generalised epilepsy
Prof. T O'Brien	Professor David Reutens	A randomised double-blind placebo controlled dose finding study to evaluate the efficacy and safety of padsevonil as adjunctive treatment of focal onset seizures in adult subjects with drug resistant epilepsy. Phase II
Prof. David Reutens	Professor David Reutens	Feasibility study of a wearable drowsiness detector in epilepsy

## 2018 Research Grants – Awarded

Investigators <i>(RBWH staff in bold)</i>	RBWH Research Groups/ Departments	Project Title	Granting Body	Amount in 2018	Total Amount <i>(years)</i>
V Vegh, DC Reutens, M Gray, C Riney, S Malone	NHMRC Project Grant. APP1104933	Novel MRI approaches to map focal cortical dysplasia in focal epilepsy	NHMRC		\$465,489 (2016-2018)
<b>David Reutens</b>	Neurology/Epilepsy	Training Centre of Innovation in Biomedical Imaging Technology IC170100035	ARC Industrial Transformation	\$948,742	\$4,743,710 (2017-2021)
<b>David Reutens</b>	Neurology/Epilepsy	“Targeting Complement in post-traumatic epileptogenesis”	US Department of Defence Congressionally Directed Medical Research Programs. EP160027	\$687,170	USD \$545,005.46

## 2018 Research Publications

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### Journal Articles:

1. Venkatachalam TK, Bernhardt PV, Stimson DHR, Pierens GK, Bhalla R, **Reutens DC**. A novel strategy to introduce F-18, a positron emitting radionuclide, into a gallium nitrate complex. Synthesis, NMR, X-ray crystal structure and preliminary studies on radiolabeling with F-18. *Aust J Chem* 2018; 71:81-86
2. Venkatachalam T, Stimson D, Pierens G, Bhalla R, **Reutens D**. Challenges in the automated synthesis of [<sup>18</sup>F]-1-fluoroethyl tryptophan: Formation of both O- and N-alkylated products. *Appl Radiat Isot* 2018; 131:41-48
3. Nguyen HD, Ullmann JFP, McLachlan GJ, Voleti V, Li W, Hillman EMC, **Reutens DC**, Janke AL. Whole-volume clustering of time series data from zebrafish brain calcium images via mixture modelling. *Stat Anal Data Min* 2018; 11(1): 5-16
4. Rigg J, Irwin K, Tremayne F, **Reutens D**. Postural change in convulsive seizures: a retrospective review of video EEG recordings. *Intern Med J* 2018; 48: 50-54
5. Bollman S, Robinson SD, O'Brien K, Vegh V, Janke A, Marstaller L, **Reutens DC**, Barth M. The challenge of bias free coil combination for quantitative susceptibility mapping at ultra-high field. *Magn Reson Med* 2018; 79(1): 97-107
6. Barton S, Nadebaum C, Anderson VA, Vajda F, **Reutens DC**, Wood AG. Memory dysfunction in school-aged children exposed prenatally to anti-epileptic drugs. *Neuropsychology* 2018;32(7):784-796
7. Benjamin CFA, Li AX, Blumenfeld H, Constable RT, Alkawadri R, Bickel S, Helmstaedter C, Meletti S, Bronen R, Warfield SK, Peters JM, **Reutens D**, Spencer DD, Hirsch LJ. Presurgical language fMRI: Clinical practices and patient outcomes in epilepsy surgical planning. *Hum Brain Mapp* 2018; 39:2777-2785
8. Yu Q, **Reutens D**, Vegh V. Can anomalous diffusion models in magnetic resonance imaging be used to characterise white matter tissue microstructure? *Neuroimage* 2018; 175:122-137
9. Ziser L, Meyer-Schell N, Kurniawan ND, Sullivan R, **Reutens D**, Chen M, Vegh V. Utility of gradient recalled echo magnetic resonance imaging for the study of myelination in cuprizone mice treated with fingolimod. *NMR Biomed* 2018; 31(3). doi: 10.1002/nbm.3877
10. Frisch K, Stimson DHR, Venkatachalam T, Pierens GK, Keiding S, **Reutens D**, Bhalla R. N-(4-[<sup>18</sup>F] fluorobenzyl) cholyglycine, a novel tracer for PET of enterohepatic circulation of bile acids: radiosynthesis and proof-of-concept studies in rats. *Nucl Med Biol* 2018; 61:56-62
11. Marstaller L, Fynes-Clinton S, Burianová H, **Reutens DC**. Evidence for a functional specialization of ventral anterior temporal lobe for language. *Neuroimage* 2018 Dec; 183:800-810
12. Bonyadi MR, Tieng QM, **Reutens DC**. Optimization of distributions differences for classification. *IEEE Trans Neural Netw Learn Syst*. 2018 Jul 2. doi: 10.1109/TNNLS.2018.2844723
13. Benjamin CFA, Dhingra I, Li AX, Blumenfeld H, Alkawadri R, Bickel S, Helmstaedter C, Meletti S, Bronen RA, Warfield SK, Peters JM, **Reutens D**, Potczyńska MM, Hirsch LJ, Spencer DD. Presurgical language fMRI: Technical practices in epilepsy surgical planning. *Hum Brain Mapp*. 2018 Oct;39(10):4032-4042. doi: 10.1002/hbm.24229
14. Kadamangudi S, **Reutens D**, Sood S, Vegh V. Signal compartments in ultra-high field multi-echo gradient echo MRI reflect underlying tissue microstructure in the brain. *Neuroimage* 2018 Sep; 178:403-413. doi: 10.1016/j.neuroimage.2018.05.061
15. Venkatachalam TK, Bernhardt PV, Pierens GK, **Reutens DC**. NMR, X-ray crystal structure studies and mechanism for formation of a novel di-gallium complex and 5-methoxy-4,5,6-triphenyl-4,5-dihydro-1,2,4-triazene-3(2H)-thione. *J Chem Crystallogr* (In Press; Accepted 23/10/18)
16. Du J, Vegh V, **Reutens D**. Abrupt transition of neuronal network dynamics: implications for the generation of seizures and epilepsy. *Sci Rep* (In Press; Accepted 24/11/18)
17. Vogel M, Pellicer Guridi R, Su J, Vegh V, **Reutens D**. 3D-Spatial encoding with permanent magnets for ultra-low field magnetic resonance imaging. *Sci Rep* (In Press; Accepted 17/12/18)
18. Venkatachalam TK, Bernhardt PV, Pierens GK, Stimson DHR, Bhalla R, **Reutens DC**. Synthesis and characterization of indium(III) bis-thiosemicarbazone complexes: <sup>18</sup>F incorporation for PET imaging. *Aust J Chem* (Accepted 11/12/18)
19. Ando T, Bhamidimarri SP, Brending N, Colin-York H, Collinson L, De Jonge N, de Pablo P J, Debroye E, Eggeling C, Franck C, Fritzsche M, Gerritsen H, Giepmans BNG, Grunewald K, Hofkens J, Hoogenboom JP, Janssen KPF, Kaufman R, Klumpermann J, Kurniawan N, Kusch J, Liv N, Parekh V, Peckys DB, Rehfeldt F, **Reutens DC**, Roeffaers MJB, Salditt T, Schaap IAT, Schwarz US, Verkade P, Vogel MW, Wagner R, Winterhalter M, Yuan H, Zifarelli G. The 2018 correlative microscopy techniques roadmap. *J Phys D* 2018; 51(44): Article Number: 443001.



## Neurology – Motor Neurone Disease Research

The Motor Neurone Disease (MND) research team is led by Associate Professor Rob Henderson and Professor Pam McCombe. The team involves neurologists, scientists, University of QLD (UQ), PhD students, a neuropsychologist and research coordinators, the team has links to the University of QLD, University of NSW and the Royal Prince Alfred Hospital and also collaborates with international MND researchers.

MND research includes involvement in clinical pharmaceutical trials currently three are in progress. The research coordinators are involved in the setup and running of these ongoing studies.

MND participants are recruited via bi monthly MND clinics or via referral from external Neurologists. A regular MND Research clinic is conducted weekly to allow interested patients and families to meet all the researchers and discuss current research projects prior to deciding whether they wish to participate.

Neuropsychological research is conducted by the team neuropsychologist and a PhD student investigating cognitive and behavioural changes in MND patients. Another project investigates the role of metabolism in MND and has found a proportion of patients experience hypermetabolism. The study has expanded to include collection and analysis of gut biomes and more extensive dietary history.

There remains a lack of reliable diagnostic and prognostic biomarkers for the disease. Several of the research projects aim to find novel biomarkers for the disease. This includes blood collection sent to UQ laboratories for genetic screening/biomarker studies. A national MND database system known as SALSAs has been implanted over the last two years and all new and existing patients participating in research are entered onto the new database. There are regular fund-raising events throughout the year including a Golf Day and an MND lunch event. Money for the MND research is held within the Royal Brisbane and Women's Hospital Foundation.

### Supervised Post-Graduate Research Students

Name <i>(RBWH staff in bold)</i>	Current Studies <i>(e.g. PhD, Masters etc.)</i> University <i>(duration)</i>	Research Project Title	Supervisors <i>(RBWH staff in bold)</i>
Amelia Hobson	Doctorate of Clinical Psychology & Clinical Neuropsychology UQ (2015- present)	Internally- generated responses and the role of apathy and depression in Motor Neurone Disease	Gail Robinson

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

Name	Type of Fellowship	Research Program	University <i>(years)</i>
Gaurav Singh	Research Fellow	Clinical Research	Fellow Royal Australian College of Physicians (2018-)
Frederick Steyn	Honorary Research Fellow	Clinical Research	University of Queensland (2008-)
Amelia Ceslis	Visiting Researcher	UQ Psychology	University of Queensland (2016-)
Gail Robinson	Visiting Researcher	UQ Psychology	University of Queensland (2010-)

### 2018 Current RBWH Research Group / Department Led Research Activity

RBWH Research Group/Department Lead Researchers	Collaborative Researchers	Research Project Title
Motor Neurone Disease Research Clinic, Neurology Department	Amelia Ceslis, <b>Rosemary Argall</b> , Gail Robinson, <b>Robert Henderson</b> , <b>Pamela McCombe</b> , <b>Susan Heggie</b> , <b>Kate Thorpe</b>	Assessment of cognition and behaviour in Motor Neurone Disease in a clinical setting and the impact of education sessions on carer well-being

## 2018 Collaborative Research Activity involving RBWH Research Group / Department

Collaborative Lead Researchers	RBWH Researchers	Research Project Title
Frederick Steyn	<b>Pam McCombe (Neurology) Robert Henderson (Neurology)</b>	Endocrine and Appetite Targets and Therapies for Motor Neuron Disease; a prospective observational Study
Frederick Steyn	<b>Robert Henderson (Neurology)</b>	Use of Point of Care (PoC) testing to improve respiratory management and monitoring of disease progression in ALS: a Pilot Study
Gail Robinson, Naomi Wray, Anjali Henders, Sharon Abrahams, Ammar Al-Chalabi	<b>Robert Henderson, Pamela McCombe</b>	Longitudinal assessment of behaviour and cognition in ALS through brief Online Carer's behavioural Questionnaire (OCQ)

## 2018 Research Grants – Awarded

Investigators ( <i>RBWH staff in bold</i> )	RBWH Research Groups/ Departments	Project Title	Granting Body	Amount in 2018	Total Amount (years)
Gail Robinson, Naomi Wray, Anjali Henders, Sharon Abrahams, <b>Robert Henderson, Pamela McCombe</b> , Ammar Al-Chalabi	<b>Motor Neurone Disease Research Clinic, Neurology Department</b>	Longitudinal assessment of behaviour and cognition in ALS through brief Online Carer's behavioural Questionnaire (OCQ)	MNDRIA	\$107,000	2018-2019

## 2018 Research Publications

### Journal Articles:

- McCombe PA**, Ngo ST, Guo CC, Fazlollahi A, Bollmann S, Wang L, Hu X, Barth M, Salvado O, Davis M, **Ceslis A**, Robinson G, **Henderson RD, Steyn FJ**. Patient with ALS with a novel TBK1 mutation, widespread brain involvement, behaviour changes and metabolic dysfunction. *J Neurol Neurosurg Psychiatry*. 2018 Sep 8. pii: 10.1136/jnnp-2018-318823. doi: 10.1136/jnnp-2018-318823
- Ngo ST, Mi JD, **Henderson RD, McCombe PA, Steyn FJ**. Exploring targets and therapies for amyotrophic lateral sclerosis: current insights into dietary interventions. *Degener Neurol Neuromuscul Dis*. 2018 Jul 25; 7:95-108
- Henderson RD**, Garton F, Kiernan MC, Turner MR, Eisen A. Human cerebral evolution and the clinical syndrome of amyotrophic lateral sclerosis. *J Neurol neurosurg Psychiatry*. 2018 Apr 17. pii: jnn9p-2017-317245. Doi: 10.1136/jnnp-2017-317245. (Epub ahead of print)
- Xu Z. Mass spectrometry analysis of plasma from Amyotrophic lateral Scler Frontotemporal Degener. 2018; 19:362-376
- Frederick J Steyn, Zara Ioannides**, Ruben PA van Eijk, **Susan Heggie, Kathryn Thorpe, Amelia Ceslis, Saman Heshmat, Anjali J Henders, Naomi R Wray, Leonard H van den Berg, Robert Henderson, Pamela A McCombe**, Shyuan T Ngo. Hypermetabolism in ALS is associated with greater functional decline and shorter survival. *J Neurol Neurosurg Psychiatry*. 2018 Apr 29. pii: jnnp-2017-317887. doi: 10.1136/jnnp-2017-317887.

## 2018 Conference Presentations – Invited Speaker, Oral and Poster

### Oral Presentations:

- Robinson, G. Cognition and behaviour in MND. MND Connect Conference, November 2018. Melbourne, Australia
- Ceslis, A, **Argall, R., Henderson. R., McCombe, P.**, & Robinson, G. The spectrum of language impairments in amyotrophic lateral sclerosis. 11th International Conference for frontotemporal Dementia 2018. Sydney, Australia.

### Poster Presentations:

- Ceslis, **A, Argall, R., Henderson. R., McCombe, P.**, & Robinson, G. The language signature of amyotrophic lateral sclerosis. Fight MND Australasian MND Symposium 2018. Melbourne, Australia
- Ceslis, **A, Argall, R., Henderson. R., McCombe, P.**, & Robinson, G. The language signature of amyotrophic lateral sclerosis. 11<sup>th</sup> International Conference for frontotemporal Dementia 2018. Sydney, Australia.

## Neurology – Stroke

The RBWH Stroke group continues to play a leading role in Queensland stroke research at all levels of the stroke journey, both leading and facilitating research of many types within the Stroke Unit.

In the prehospital phase we are working on device-assisted diagnosis of stroke. In the emergency phase we continue to refine diagnostic evaluation and treatment approaches in collaboration with the Department of Medical Imaging. Our multicentre secondary prevention studies included anticoagulant and antiplatelet research and medications to enhance stroke recovery.

Our Nurse Practitioner has also started research into novel models of care for previously-employed stroke patients discharged directly from hospital (i.e. without being transferred for inpatient rehabilitation). We continue to collaborate with and facilitate research by other staff from QUT and UQ who are investigating various aspects of the acute stroke journey with our patients.

We thank the RBWH Foundation for their ongoing support of our research program, the pinnacle of which is their organisation and support for the annual Master Stroke Business Luncheon.

### Supervised Post-Graduate Research Students

Name <i>(RBWH staff in bold)</i>	Current Studies <i>(e.g. PhD, Masters etc.)</i> University <i>(duration)</i>	Research Project Title	Supervisors <i>(RBWH staff in bold)</i>
Wayne Loudon	PhD	An investigation of the pre-hospital diagnosis and triage of ischemic hyper-acute stroke to recommended reperfusion therapies	Vivienne Tippett, <b>Andrew Wong</b> , Emma Bosley, Michele Clarke

### 2018 Current RBWH Research Group / Department Led Research Activity

RBWH Research Group/Department Lead Researchers	Collaborative Researchers	Research Project Title
<b>A/Prof Andrew Wong</b>	Prof Vivienne Tippett, Dr Simon Finnigan, Wayne Loudon	Stroke Prehospital Informed Decision-making using EEG Recordings (SPIDER)

### 2018 Collaborative Research Activity involving RBWH Research Group / Department

Collaborative Lead Researchers	RBWH Researchers	Research Project Title
Chris Bladin (The Florey Institute of Neuroscience and Mental Health)	Claire Muller, Andrew Wong	A multicentre, randomised controlled trial of exenatide versus standard care in acute ischaemic stroke
Andrew Lee (Flinders Medical Centre)	Andrew Wong, Michael Roizman	An MRI registry of clinical and radiological outcomes following initiation of anticoagulation after ischaemic stroke or transient ischaemic attack in patients with atrial fibrillation
Geoffrey Donnan (The Florey Institute of Neuroscience and Mental Health), Stephen Davis (Royal Melbourne Hospital)	Andrew Wong, Claire Muller	A randomised, multicentre, double blinded, placebo controlled phase 3 trial in ischaemic stroke patients with significant penumbral mismatch at 4.5–9 hours post onset of stroke or after 'wake up' stroke comparing intravenous tPA with placebo
Mark Parsons (John Hunter Hospital)	Andrew Wong, Claire Muller	A multicentre, prospective, randomised open-label blinded endpoint phase III study in stroke thrombolysis patients to compare tenecteplase and alteplase for an outcome of less disability at three months
Bruce Campbell (Royal Melbourne Hospital), Peter Mitchell (Royal Melbourne Hospital)	Andrew Wong, Claire Muller	A randomized controlled trial of tenecteplase versus alteplase before intra-arterial reperfusion therapy within 4.5 hours of stroke onset
C. de Bodinat (France)	Andrew Wong, Claire Muller	An international, multi-centre, randomized, double-blind placebo-controlled phase II study, assessing the efficacy and safety of S44819 versus placebo in ischemic stroke recovery
Todd Verdoorn (USA), Bruce Campbell (Royal Melbourne Hospital)	Andrew Wong, Claire Muller	A randomized, double-blind, placebo-controlled phase II multi-center evaluation to assess the safety and tolerability of DM199 administered intravenously and subcutaneously in subjects with acute ischemic stroke

## 2018 Research Grants – Awarded

Investigators (RBWH staff in bold)	RBWH Research Groups/ Departments	Project Title	Granting Body	Amount in 2018	Total Amount (years)
<b>Dr Claire Muller</b>	Neurology/Stroke	TEXAIS: Treatment with exenatide in acute ischemic stroke trial protocol: a prospective, randomized, open label, blinded end-point study of exenatide vs. standard care in post stroke hyperglycaemia (Imaging sub-study)	Herston Imaging Research Facility	Provision of scanner access, until 30 <sup>th</sup> June 2019	Provision of scanner access, until 30 <sup>th</sup> June 2019

## 2018 Research Publications

### Journal Articles:

- Muller, Claire;** Cheung, N Wah; Dewey, Helen; Churilov, Leonid; Middleton, Sandy; Thijs, Vincent; Ekinci, Elif I; Levi, Chris; Lindley, Richard; Donnan, Geoffrey; Parsons, Mark; Bladin, Chris. Treatment with exenatide in acute ischemic stroke trial protocol: a prospective, randomized, open label, blinded end-point study of exenatide vs. standard care in post stroke hyperglycaemia. *Int J Stroke* (2018) 13(8): 857-862
- Campbell, Bruce CV; Mitchell, Peter J; Churilov, Leonid; Yassi, Nawaf; Kleinig, Timothy J; Yan, Bernard; Dowling, Richard J; Bush, Steven J; Dewey, Helen M; Thijs, Vincent; **Wong, Andrew A** et al. Tenecteplase versus alteplase before endovascular thrombectomy (EXTEND-IA TNK): a multicenter, randomized, controlled study. (2018) 13 (3): 328-334
- Fanning, Jonathon P; Wesley, Allan J; Walters, Darren L; **Wong, Andrew A;** Barnett, Adrian G; Strugnell, Wendy E; Platts, David G; Fraser, John F; Topographical distribution of perioperative cerebral infarction associated with transcatheter aortic valve implantation. *Am Heart Journal* (2018) 197: 113-123
- Campbell, Bruce CV; Mitchell, Peter J; Churilov, Leonid; Yassi, Nawaf; Kleinig, Timothy J; Dowling, Richard J; Yan, Bernard; Bush, Steven J; Dewey, Helen M; Thijs, Vincent; **Wong, Andrew A;** Muller, Claire T et al. Tenecteplase versus alteplase before thrombectomy for ischemic stroke. *NEJM* (2018) 378(17): 1573-82
- Cornwell, Petrea; Gustafsson, Louise; Hodson, Tenelle; Kuys, Suzanne; **Wong, Andrew;** Thompson, Leah; Longitudinal investigation of fatigue following mild stroke: impact on community integration. (2018) 13:12.

## 2018 Conference Presentations – Invited Speaker, Oral and Poster

### Invited Speaker:

- Muller, C.** Updates in Cerebral Amyloid Angiopathy. National Stroke Unit Heads Meeting, 2018
- Muller, C.** Debate: All DOACs are Essentially Different. Stroke Society of Australasia ASM, 2018
- Muller, C.** Case Discussions: Neuroimaging Forum. Stroke Society of Australasia ASM, 2018
- Muller, C.** Case Discussions: Thrombolysis Forum. Stroke Society of Australasia ASM, 2018
- Muller, C.** MRI Interpretation. Multiple Sclerosis Nurses Australia Inc Conference 2018
- Wong, A.** When to start/restart anticoagulation after stroke/TIA/ICH, Bayer Cardiovascular Alliance 4<sup>th</sup> Annual Meeting
- Wong, A.** DAWN in detail, 1<sup>st</sup> Australian Korean Joint Stroke Congress, Seoul, Korea
- Wong, A.** Cardioembolic source evaluation: Extensive, 1<sup>st</sup> Australian Korean Joint Stroke Congress, Seoul, Korea
- Wong, A.** PFO: close or not close it, 1<sup>st</sup> Australia-Vietnam Joint Stroke Congress, Ho Chi Minh City, Vietnam
- Wong, A.** Secondary Prevention after Stroke: the importance of lipid control, 1<sup>st</sup> Australia-Vietnam Joint Stroke Congress, Ho Chi Minh City, Vietnam
- Wong, A.** Local Thrombolysis for Intraventricular Hemorrhage (IVH) & Intracranial Hemorrhage (ICH) - Is there a Role? 1<sup>st</sup> Australia-Vietnam Joint Stroke Congress, Ho Chi Minh City, Vietnam
- Wong, A.** Therapeutic strategies for cerebral small vessel disease. Asia Pacific Stroke Conference, Jakarta, Indonesia.
- Wong, A.** Antiplatelets to New Oral Anticoagulants. Asia Pacific Stroke Conference, Jakarta, Indonesia.
- Wong, A.** The eligibility and admission criteria for stroke rehabilitation. Asia Pacific Stroke Conference, Jakarta, Indonesia.
- Wong, A.** Concept of the ischaemic penumbra. Asia Pacific Stroke Conference, Jakarta, Indonesia.
- Wong, A.** Stroke – from acute onset to long-term management. Bayer GP Masterclass, Brisbane
- Wong, A.** Difficult Thrombolysis Cases, Australasian Stroke Academy Seminar, Sydney
- Wong, A.** Stroke Management 2018: Thrombolysis and clot Retrieval, Australasian College of Emergency Medicine Autumn Symposium, Brisbane.

## Nuclear Medicine and Specialised PET Services Qld

The Department of Nuclear Medicine at the Royal Brisbane and Women's Hospital (RBWH) is one of the largest in Australia. It provides a referral, diagnostic and therapeutic nuclear medicine service with four SPECT/CT gamma cameras, one solid state cardiac camera, BMD dual energy X-ray absorptiometry (DEXA) and a pQCT scanner. Research interests in nuclear medicine include image reconstruction methodologies, application of gating and bone mineral densitometry in various disease states.

The department hosts the state-wide Specialised PET Services Queensland, which operates two state-of-the-art PET/CT scanners and Q-TRaCE, a TGA accredited radiopharmaceutical laboratory operating a cyclotron. It offers research facilities to a wide variety of investigators. In addition to conventional tracers such as fluorodeoxyglucose ( $^{18}\text{F}$ FDG), the Service also conducts research using  $^{18}\text{F}$ DOPA,  $^{18}\text{F}$ MISO,  $^{18}\text{F}$ PSMA1007,  $^{18}\text{F}$ FGE180 and  $^{68}\text{Ga}$ -DOTATATE,  $^{68}\text{Ga}$ -PSMA and  $^{68}\text{Ga}$ -Pentixafor. There is also ongoing research interest in image reconstruction algorithms, respiratory gating and image analysis techniques.

The department also provides a radionuclide therapy service for patients with inoperable neuroendocrine tumours and recently commenced treatment for prostate cancer through the TheraP trial. Whilst predominantly focussed upon clinical service delivery, retrospective analysis of patients previously treated in our statewide NET service aims to more effectively tailor our treatment to patients most likely to benefit and minimise the risk of side effects.

Steven Goodman, Shaun Patford, Jye Smith and David Pattison received a QuARRIES Award for their Novel Efficient Radionuclide Therapy Risk Assessment project.

David Pattison was a Co-Investigator on successful \$1.8 million Medical Research Future Fund (MRFF) grant for the Targeted Therapy and Avelumab in Merkel Cell Carcinoma (GoTHAM) Trial.

### Supervised Post-Graduate Research Students

Name <i>(RBWH staff in bold)</i>	Current Studies <i>(e.g. PhD, Masters etc.)</i> University <i>(duration)</i>	Research Project Title	Supervisors <i>(RBWH staff in bold)</i>
<b>Dominique Scott</b>	MPhil UQ (PT 2017-)	New radiopharmaceutical methodology for PET imaging	<b>Melissa Latter</b> , Kristofer Thurecht
<b>Brenda Tai</b>	MPhil UQ (PT 2018-)	PET radiopharmaceuticals as molecular imaging tools for improved clinical outcome	<b>Melissa Latter</b> , Kristofer Thurecht
Rahul Ladwa	MPhil UQ (PT 2017-)	Predictors of dosimetry and response to peptide receptor radionuclide therapy in metastatic neuroendocrine tumour	<b>David Wyld</b> , <b>David Pattison</b> , Stephen Rose

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

Name	Type of Fellowship	Research Program	University <i>(years)</i>
<b>Dr Jye Smith</b>	Adjunct lecturer	Faculty of Medicine	UQ (2009-current)
<b>Dr Marissa Bartlett</b>	Adjunct lecturer	Faculty of Medicine	UQ (2010-current)
<b>Dr Melissa Latter</b>	Honorary Research Fellow	Faculty of Medicine	UQ (2014-current)
<b>A/Prof David Pattison</b>	Associate Professor	Faculty of Medicine	UQ (2018-current)
<b>A/Prof Paul Thomas</b>	Associate Professor	Faculty of Medicine	UQ (2014-current)
<b>A/Prof Stuart Ramsay</b>	Associate Professor	Medicine	JCU (2013-current)

### 2018 Current RBWH Research Group / Department Led Research Activity

RBWH Research Group/ Department Lead Researchers	Collaborative Researchers	Research Project Title
<b>David Pattison</b>	Paul Thomas, Stuart Ramsay, Brook Gulhane, Maciej Debowski	$^{18}\text{F}$ -PSMA-1007 vs $^{68}\text{Ga}$ -PSMA-11 trial
<b>Manoj Bhatt</b>	David Pattison, David Wyld, Kevin Lee, Matthew Burge	Ga-DOTATATE PET/MRI
<b>Jye Smith</b>	Matthew Griffiths, Paul Thomas	PSMA Salivary Gland Vasoconstriction



## 2018 Collaborative Research Activity involving RBWH Research Group / Department

Collaborative Lead Researchers	RBWH Researchers	Research Project Title
Rahul Ladwa	David Pattison, David Wyld, Matthew Burge, Nicholas Dowson, Stephen Rose, Jye Smith, Stephen Goodman, Steven Williams	Predictors of dosimetry and response to peptide receptor radionuclide therapy
Ashleigh Scott	Glen Kennedy, Siok Tey, David Pattison, Paul Thomas	Pilot study of <sup>18</sup> FGE-180-PET to assess acute gastrointestinal graft versus host disease
Jeffrey Goh, David Pattison	Stuart Ramsay, Kevin Lee, Paul Thomas, Patrina Campbell, Melissa Latter,	TheraP trial. LuPSMA study (RBWH pilot study and ANZUP trial)
David Wyld	David Pattison, Kevin Lee, Manoj Bhatt, Stuart Ramsay	CONTROLNETS

## 2018 Research Awards and Achievements

Recipient	Award	Event
Brittany Robinson	Curium Award	World Federation of Nuclear Medicine and Biology, 2018
Steven Goodman	Finalist – Physics Prize	World Federation of Nuclear Medicine and Biology, 2018
Steven Goodman, Shaun Patford, Rahul Ladwa, Jye Smith, David Wyld, David Pattison	Service Line Award – Novel Efficient Radionuclide Therapy Risk Assessment	QuARRIES Award 2018

## 2018 Research Grants – Awarded

Investigators (RBWH staff in bold)	RBWH Research Groups/ Departments	Project Title	Granting Body	Amount in 2018	Total Amount (years)
Sandhu S, Scolyer R, Atkinson V, Poulsen M, Emmett L, Tothill R, Neeson P, <b>Pattison DA</b> , Guminski A	Dept of Nuclear Medicine and Specialised PET Services	TarGeted Therapy and Avelumab in Merkel Cell Carcinoma (GoTHAM) Trial	MRFF	\$360,000	\$1,800,000 (2018-2022)
PI Pryor D Al2 <b>Thomas P</b>		“A Prospective Pilot Study of a Novel PET/MRI Evaluation of Regional Liver Function to Guide Surgery and Stereotactic Radiation Therapy for Hepatocellular Carcinoma”	FDGal PET quantitation liver grant Princess Alexandra Hospital Foundation	\$100,000	\$100,000 (2018)

## 2018 Research Publications

### Journal Articles:

- Pattison DA\***, Bozin M\*, Gorelik A, Hofman MS, Hicks RJ, Skandaraja A. <sup>18</sup>F-fluorodeoxyglucose-avid thyroid incidentalomas: the importance of contextual interpretation. *Journal of Nuclear Medicine* 2018; 59: 749-755
- Hicks RJ, Jackson P, Kong G, Ware RE, Hofman MS, **Pattison DA**, et al. First-in-human trial of <sup>64</sup>Cu-SARTATE PET imaging of patients with neuroendocrine tumours demonstrates high tumor uptake and retention, potentially allowing prospective dosimetry for peptide receptor radionuclide therapy. *Journal of Nuclear Medicine* 2018; [Epub ahead of print]
- Ladwa R**, Wen Hong H, **Wyld D**, **Pattison DA**, **Burge M**. Tumour Cystic Necrosis following Peptide Receptor Radionuclide Therapy in Neuroendocrine Tumours. *Clinical Nuclear Medicine* 2018; 43: 186-187
- Mossman A, **Pattison DA**, Hicks RJ, Hamblin PS, Yates C. Localisation of occult extra-pancreatic insulinoma using Glucagon-Like Peptide-1 receptor molecular imaging. *Internal Medicine Journal* 2018; 48: 97-98
- Tang V**, **Campbell P**, **Pattison DA**. Lymphangitic carcinomatosis from prostate cancer identified with Gallium-68 Prostate-Specific Membrane Antigen positron emission tomography imaging. *Urology* 2018; 114: e1-e2
- Bongetti E, Lee MH, **Pattison DA**, Hicks RJ, Norris R, Sachithanandan, Maclsaac RJ. Diagnostic challenges in a patient with an occult insulinoma: <sup>68</sup>Ga-DOTA-exendin-4 PET/CT and <sup>68</sup>Ga-DOTATATE PET/CT. *Clinical Case Reports* 2018; 6: 719-722
- Ramsay S**, **Lindsay K**, **Fong W**, **Patford S**, **Younger J**, **Atherton J**. Tc-HDP quantitative SPECT/CT in transthyretin cardiac amyloid and development of a reference interval for myocardial uptake in the non-affected population. *European Journal of Hybrid Imaging*; DOI: 10.1186/s41824-018-0035-1.
- Dhanani J A, Cohen J, Parker SL, **Bhatt MK**, **Goodman S**, et al. A research pathway for the study of the delivery and deposition of nebulised antibiotics: an incremental approach from in vitro to large animal models. *Intensive Care Medicine Experimental*; (2018) 6:17: p 2-19
- Donato P<sup>1</sup>, Roberts MJ<sup>1,2</sup>, Morton A<sup>2</sup>, **Kyle S<sup>2,3</sup>**, Coughlin G<sup>1</sup> & Esler R<sup>1</sup> & Dungleison N<sup>1</sup> & Gardiner RA<sup>1,2,4,5</sup> & **Yaxley J<sup>1,2</sup>**. Improved specificity with <sup>68</sup>Ga-PSMA PET/CT to detect clinically significant lesions “invisible” on multiparametric MRI of the prostate: a single institution comparative analysis with radical prostatectomy histology. *European Journal of Nuclear Medicine and Molecular Imaging*. Published online: 19 September 2018.

### Book Chapters / Letters:

1. **Pattison DA**, Miller JA, Khavar B, Tie J. Management of distant metastasis in differentiated thyroid cancer. In: Parameswaran R, Agrawal A, editors. Evidence-Based Endocrine Surgery, Springer Nature, Netherlands; 2018.

### 2018 Conference Presentations – Invited Speaker, Oral and Poster

#### Invited Speaker:

1. **Pattison DA**. FDOPA imaging in hypoglycaemia of infancy; World Federation of Nuclear Medicine and Biology Congress (Melbourne) 2018
2. **Pattison DA**. Current controversies in Thyroid Cancer Management; World Federation of Nuclear Medicine and Biology Congress (Melbourne) 2018
3. **Pattison DA**. The complexities of treating metastatic Differentiated Thyroid Cancer; World Federation of Nuclear Medicine and Biology Congress (Melbourne) 2018
4. **Latter MJ**. Experiences from a Clinical Radiopharmaceutical Laboratory; 9<sup>th</sup> International Nanomedicine Conference (Sydney) 2018
5. **Pattison DA**. Molecular Imaging and Radionuclide Therapy for Advanced Thyroid Cancer. Australia & New Zealand Head and Neck Cancer Society Meeting (Melbourne), July 2018
6. **Pattison DA**. Molecular Imaging and Radionuclide Therapy for Neuroendocrine Tumours. Royal Australasian College of Physicians Endocrine Registrar Lecture Series (Brisbane), August 2018
7. **Pattison DA**. LuPSMA and Theranostics for mCRPC. Brisbane Cancer Conference (Brisbane), November 2018
8. **Pattison DA**. Iodine PET scans. Australia & New Zealand Endocrine Surgeons Association 7<sup>th</sup> Postgraduate Course in Endocrine Surgery (Gold Coast), November 2018
9. **Pattison DA**. Management of Pancreatic Hormone Syndromes. Asia Pacific Neuroendocrine Tumour Society Annual Scientific Meeting (Melbourne), November 2018.

#### Oral Presentations:

1. **Robinson B, Pattison DA, Lee K**. <sup>18</sup>F PET/CT Cardiac Sarcoid Imaging: monitoring ketone levels to avoid inadequate suppression of physiologic myocardial uptake (Oral). World Federation of Nuclear Medicine and Biology Congress 2018
2. **Lindsay K, Ramsay S**. Quantitative xSPECT/CT: Redefining the Diagnosis of Transthyretin Cardiac Amyloidosis. World Federation of Nuclear Medicine and Biology Congress 2018.

#### Poster Presentations:

1. **McGuinness M, Ramsay S, Latter MJ, Thomas P, Bhatt M, Kyle S, Lee L, Pattison DA**. Variations in physiological radiopharmaceutical distribution between <sup>18</sup>F-PSMA-1007 and <sup>68</sup>Ga-PSMA-11 PET/CT (Poster). World Federation of Nuclear Medicine and Biology Congress 2018
2. **Goodman S, Patford S, Ladwa R, Smith J, Wyld D, Pattison DA**. Validation of abbreviated <sup>177</sup>Lu-DOTATATE renal and tumour dosimetry protocol using quantitative SPECT (Poster). World Federation of Nuclear Medicine and Biology Congress 2018
3. **Latter MJ, Tapper S, Coogan P, Millar S, Maguire G, Scott D, Tai C, Bartlett M, Lummis S, Ergenekon A, Brown G, Pattison DA, Thomas P**. <sup>68</sup>Ga and <sup>18</sup>F PSMA – the radiopharmaceutical laboratory perspective and experience (Poster). World Federation of Nuclear Medicine and Biology Congress 2018
4. **Ladwa, R, Pattison DA, Smith J, Goodman S, Burge M**, Dowson N, Rose S, **Wyld D**. Tumour absorbed dosimetry and response of radionuclide therapy in metastatic neuroendocrine tumour (Poster). European Neuroendocrine Tumour Society (ENETS) Conference 2018
5. **Ladwa, R, Pattison DA, Smith J, Goodman S, Burge M**, Dowson N, Rose S, **Wyld D**. Pretherapeutic PET predictors of tumour response of radionuclide therapy for metastatic neuroendocrine tumours (Poster). European Neuroendocrine Tumour Society (ENETS) Conference 2018
6. **Ladwa, R, Pattison DA, Smith J, Goodman S, Burge M**, Dowson N, Rose S, **Wyld D**. Pretherapeutic predictors of tumour absorbed dosimetry in radionuclide therapy for metastatic neuroendocrine tumours (Poster). European Neuroendocrine Tumour Society (ENETS) Conference 2018
7. **Kisiel N, Ladwa R, Smith J, Lee K, Ramsay S, Bhatt M, Nocher S, Burge M, Wyld D**, Pattison DA. Renal Function Influences Renal Absorbed Dosimetry, haematologic toxicity and early withdrawal from <sup>177</sup>Lu-DOTATATE treatment (Poster). Asia Pacific Neuroendocrine Tumour Society 2018 (APNETS), Congress 9<sup>th</sup>-11<sup>th</sup> November 2018
8. Saunus JM, Lim M, Puttick S, Kalita-de Croft P, Houston ZH, Jones ML, **Latter MJ, Campbell LC, Thomas P**, Jeffrey RL, Rose SE, Mahler SM, Thurecht KJ, Scott AM, and Lakhani SR. Innovation in diagnosis and treatment of brain metastases using multifunctional nanomedicines. San Antonio Breast Cancer Symposium 2018
9. Scott A, **Thomas P** Et al. Targeted Molecular Imaging of Translocator Protein (TSPO) Using <sup>18</sup>FGE180-PET for the Diagnosis of Gastrointestinal Graft Versus host Disease (GI-GVHD American Society of Haematology 60<sup>th</sup> Annual Meeting, San Diego, USA, December 2018.

### Other Communications and Outputs:

**Latter MJ**. To establish a premier training and manufacturing site in translation radiopharmaceutical science; 2018 CAHRLI (Collaborative for Allied Health, Research, Learning and Innovation) Symposium (20<sup>th</sup> June 2018)

**Pearson T**, eHealth Qld to run proof of concept for universal health translator solution. Pulse IT Magazine.

## Palliative and Supportive Care

The RBWH Palliative and Supportive Care Service has continued to support research in the award-winning MN Kidney Supportive Care Program as evidenced by multiple collaborative projects. Preliminary results from the Hepatic Supportive Care Program have been well received when presented at two national conferences in 2018.

### 2018 Current RBWH Research Group / Department Led Research Activity

RBWH Research Group/Department Lead Researchers	Collaborative Researchers	Research Project Title
Pharmacy/ Palliative Care/ Oncology	<b>Mika Varitimos Neil Cottrell, Alison Kearney, Melissa Eastgate, Catherine Bettington</b>	Ref No: HREC/18/QRBW/180: investigating patient perceptions towards medicine burden in palliative oncology patients
Pharmacy/ Palliative Care	<b>Kathryn Hurree, Karen Whitfield, Elise Button, Alison Kearney, Glen Kennedy</b>	Educating patients their way
Janet Hardy	Alison Kearney	Oral Medicinal Cannabinoids to Relieve Symptom Burden in the Palliative Care of patients with Advance Cancer: double-blind, placebo controlled, RCT of efficacy and safety
<b>Dr Carol Douglas</b>	<b>Sarah Northfield</b>	The Care of the Dying Evaluation (CODE) Project: a survey of bereaved persons in an Australian acute care setting

### 2018 Collaborative Research Activity involving RBWH Research Group / Department

Collaborative Lead Researchers	RBWH Researchers	Research Project Title
David Currow, Palliative Care Clinical Studies Collaborative	<b>Alison Kearney, Carol Douglas</b>	Rapid Pharmacovigilance in Palliative Care

### 2018 Research Grants – Awarded

Investigators (RBWH staff in bold)	RBWH Research Groups/Departments	Project Title	Granting Body	Amount in 2018	Total Amount (years)
<b>Douglas C</b>	Palliative and Supportive Care	QH Care at the End of Life project – ‘Giving ‘VOICE’ to the bereaved-the evaluation of ‘CODE’ in an Australian acute care setting’	Care at the End of Life SEED grant	\$63,990	\$63,990 (2018-2019)

## 2018 Research Publications

### Journal Articles:

1. **Shirley Chamber**, Helen Healy, Wendy E. Hoy, Adrian Kark, Sharad Ratanjee, Geoffrey Mitchell, Carol Douglas, **Patsy Yates, Ann Bonner**. Health service utilisation during the last year of life: a prospective, longitudinal study of the pathways of patients with chronic kidney disease stages *BMC Palliative Care* (2018) 17:57 DOI: 10.1186/s12904-018-01310-8
2. **Alison Mudge, Carol Douglas, Xanthe Sansome, Michael Tresillin, Stephen Murray, Simon Finnigan, Cheryl Ruth Blaber**, Risk of 12-month mortality among hospital inpatients using the surprise question and SPICT criteria: a prospective study *BMJ Supportive & Palliative Care* Mar 2018, DOI: 10.1136/bmjspcare-2017-001441
3. Purtell, L., Sowa, M., Berquier, I., Scuderi, C., Douglas, C., Taylor, K., Hoy, W.E., Healy, H., & Bonner, A. (2018). The kidney supportive care program: Baseline results from a new model of care for advanced chronic kidney disease. *BMJ Supportive & Palliative Care*, DOI: 10.1136/bmjspcare-2018-001630
4. Scuderi, C., Berquier, I., Purtell, L., Bonner, A., Douglas, C., & Healy, H. (In press). Complex prescribing in chronic kidney disease: the role of the renal pharmacist in kidney supportive care uncovering hydralazine-related lupus. *Journal of Pharmacy Practice and Research*.

### Book Publication:

1. **Carol Douglas** Text book of Adult Emergency Medicine 5E published by Elsevier. Co-Author Chapter 2.1 and 2.6.

## 2018 Conference Presentations – Invited Speaker, Oral and Poster

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### Invited Speaker:

1. **Douglas C** Indian Association Palliative Care 2018, Delhi India. Proffered Paper “Point Prevalence of Patients at End of Life in an Australian Acute Hospital”
2. **Kearney Alison** Palliative Care and Supportive Management for Advanced Cirrhosis: Introducing a New Integrated Hepatocare Model GESA Australian Gastroenterology Week, September 2018.

### Oral Presentations:

1. **Kearney Alison** Hepatocare – comparison of a new multi-disciplinary model of care for advanced cirrhosis to standard care ANSPM September 2018 Sydney.

## Other Communications and Outputs:

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### Published Abstracts:

1. Purtell, L., Bonner, A., & Healy, H.G (2018). Younger adults also require kidney supportive care. *Nephrology*, 23(suppl. 3), 52. DOI: 10.1111/nep.13441
2. Purtell, L., Healy, H.G., & Bonner, A. (2018). Evaluating and optimising the delivery of kidney supportive care. *Nephrology*, 23(suppl. 3), 51. DOI: 10.1111/nep.13441
3. Purtell, L., Berquier, I., Douglas, C., Taylor, B., Kramer, K., Heffernan, D., Hoy, W.E., Bonner, A., & Healy, H.G (2017). What a patient wants: a consumer perspective of kidney supportive care. *Nephrology*, 22(suppl. 3), 49. DOI: 10.1111/nep.13104.



## Pharmacy

Practice based, translational research is now a core component of the outputs of the pharmacy department and 2018 has been a year of an expanding array of research being undertaken by RBWH pharmacy staff either as part of larger research teams as a higher degree research (HDR) students or supervisors of HDR, or post doctorate research fellows in addition to the substantial research outputs of Professor Jason Roberts' Antibiotic program.

Sixty journal articles, eight oral and 37 poster presentations were associated with 10 HDR pharmacy staff undertaking HDRs and 28 other medical, pharmacy and nursing HDR students supervised by and collaborating with RBWH senior researchers.

The range of research includes the evaluation of electronic medicine management systems, novel areas of new clinical pharmacy practice such as palliative care and emergency department services and drug therapy optimisation such Prof Jason Roberts' NHMRC funded program "Optimising antibiotic dosing to improve patient outcomes and suppress emergence of resistant superbugs." A range of research projects are being led by RBWH researchers and HDR students supervised in collaborating sites especially pharmacy departments across Queensland health.

Pharmacy staff presented or their collaborators presented work Nationally and internationally at pharmacy, nursing, medical and multi-professional meetings.

### 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>Jenna Turkington</b>	Masters, UQ (2017-)	Pharmacists engagement with feedback	Christy Noble, Elizabeth Molloy, <b>Ian Coombes</b>
<b>William Franks</b>	Mphil, UQ (2017-)	Pharmacokinetics of antifungals and antivirals in lung transplant recipients	<b>Jason Roberts</b> , Osmino Cotta, Mohd Abdul Aziz, Peter Hopkins
<b>Elizabeth Doran</b>	PhD (2018-2022)	The Role of the Emergency Department Pharmacist (EDP) in the Management of Drug Toxicities	<b>Karen Whitfield</b> , <b>Ian Coombes</b>
<b>Karen Davies</b>	PhD (2015-2018)	Evaluation and Assessment of medication administration by nurses	<b>Karen Whitfield</b> , <b>Ian Coombes</b>
<b>Angela North</b>	MPhil (2015-2018)	Investigation of Therapeutic Heparin in the peri partum period	<b>Karen Whitfield</b>
<b>Paul Firman</b>	MPhil (2016-2018)	Pharmacist Led Therapeutic Drug Monitoring	<b>Karen Whitfield</b>
<b>Kathryn Hurree</b>	MPhil (2017-2019)	Investigation of Impact of a pharmacist in palliative Care Clinics	<b>Karen Whitfield</b>
<b>Brooke Myers</b>	PhD UQ (2014-)	Evaluation of impact of pharmacists on medical post take ward rounds	<b>Ian Coombes</b> , <b>Peter Donovan</b> , Jenny Whitty, Charles Mitchell
<b>Caitlin Locke</b>	MPhil QUT (2017-)	Evaluation of Department of Emergency Pharmacy Service	Greg Merlo, Neil Cottrell, <b>Louise Cullen</b> , <b>Ian Coombes</b>
<b>Nicola Harper</b>	PhD UQ (2015-)	Impact of Electronic prescribing and Automated Medication distribution on medication errors	<b>Danielle Stowasser</b> , <b>Ian Coombes</b> , Neil Cottrell
Dr Alexis Tabah	PhD UQ (2018-)	Role of antibiotic de-escalation in critical care	<b>Jason Roberts</b>
Dr Sazlyna Lim	PhD UQ (2018-)	Optimised treatment for multidrug resistant <i>Acinetobacter baumannii</i>	<b>Jason Roberts</b>
Kamrul Islam	PhD UQ (2018-)	Optimised treatment for multidrug resistant <i>E. coli and Klebsiella pneumoniae</i>	<b>Jason Roberts</b>
Eko Setiawin	PhD UQ (2017-)	Developing antimicrobial stewardship in a resource poor hospital environment	<b>Jason Roberts</b>
Helmi Sulaiman	PhD The University of Malaya (2017-)	Optimised treatment for ventilator associated pneumonia	<b>Jason Roberts</b>
Chris Anstey	PhD UQ (2017-)	Characterising citrate disposition in continuous renal replacement therapy	<b>Jason Roberts</b>
Andrew Burke	PhD UQ (2017-)	Optimised treatment for multidrug resistant non-tuberculous mycobacterial infections	<b>Jason Roberts</b>
Paul Williams	PhD UQ (2017-)	Optimised antibiotic dosing in ICU: the role of dosing nomograms	<b>Jason Roberts</b>
Chandra Sumi	PhD UQ (2017-)	Characterising the microbiological effects of beta-lactams administered by bolus versus continuous infusion	<b>Jason Roberts</b>



## Supervised Post-Graduate Research Students (cont)

Name (RBWH staff in bold)	Current Studies (e.g. PhD, Masters etc.) University (duration)	Research Project Title	Supervisors (RBWH staff in bold)
Vesa Cheng	PhD UQ (2017-)	Optimised drug dosing for critically ill patients receiving extracorporeal membrane oxygenation	<b>Jason Roberts</b>
Dr Rochelle Ryan	PhD UQ (2017-)	Optimised dosing of perioperative antibiotics	<b>Jason Roberts</b>
Aaron Heffernan	PhD Griffith University, (2017-)	Characterising antibiotic pharmacodynamics when administered by nebulisation	<b>Jason Roberts</b>
Paul Jarrett	PhD QUT (2016-)	Characterising antibiotic wastage in ICUs	<b>Jason Roberts</b>
Nilesh Gupta	MPhil UQ (2016-)	Optimised dosing of antibiotics for central nervous system infections	<b>Jason Roberts</b>
Yarmarly Guerra Valero	PhD UQ (2016-)	Role of microsampling to improve the feasibility of dosing studies in children	<b>Jason Roberts</b>
Dr Tavey Dorofaeff	PhD UQ (2016-)	Optimised antibiotic dosing in critically ill children	<b>Jason Roberts</b>
<b>Dr Angela Tognolini</b>	MPhil UQ (2018-)	Optimised lignocaine dosing for analgesia in chronic pain patients	<b>Jason Roberts</b>
<b>William Franks</b>	MPhil UQ (2017-)	Optimised antifungal dosing in solid organ transplant patients	<b>Jason Roberts</b>
Bryan Gregory	MPhil QUT (2016-)	Optimised immunosuppressant dosing in renal replacement therapy	<b>Jason Roberts</b>
<b>Elizabeth McCourt</b>	PhD (2016-2019)	Australian pharmacists' preparedness to fulfil roles in disasters	Lisa Nissen, Vivienne Tippet, Judith Singleton
Penelope Richards	MPhil QUT (2018-)	An Assessment of Pharmacist prescribing in an Elective Surgery Pre-Admission Clinic	Lisa Nissen, Greg Kyle, <b>Andrew Hale</b>
Monika Ogilvie	MPhil QUT (2018-)	Pharmacist prescribing in the Emergency Department	Lisa Nissen, Greg Kyle, <b>Andrew Hale</b>
Karen Bettenay	PhD QUT (2018-)	An evaluation of allied health prescribing in Queensland and development of non-medical prescribing implementation and evaluation frameworks	<b>Andrew Hale</b>
Jason Waddell	PhD QUT (2018-)	An investigation into the personality characteristics of Australian Pharmacists	<b>Andrew Hale</b>
<b>Karen Davies</b>	PhD UQ (2016-)	Establishing the validity and reliability of a tool to test competency of nursing medication administration practice using an expert panel review and inter-rater and intra-rater reliability testing	<b>Karen Whitfield, Ian Coombes, Samantha Keogh</b>

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

Name	Type of Fellowship	Research Program	University (years)
<b>Ian Coombes</b>	Adjunct Associate Professor		UQ (2011-)
<b>Andrew Hale</b>	Adjunct Associate Professor		QUT (2016-)
<b>Jason Roberts</b>	NHMRC Practitioner	Optimising antibiotic dosing to improve patient outcomes and suppress emergence of resistant superbugs	2017-2021
<b>Andrew Hale</b>	Adjunct Senior Lecturer		UQ

## 2018 Current RBWH Research Group / Department Led Research Activity

RBWH Research Group/Department Lead Researchers	Collaborative Researchers	Research Project Title
PD Research Program <b>Lesley Williams, Nicola Williams</b>	Pauline Nicholas, <b>Carla Scuderi, Deborah Smith, Michelle Rice</b> , Martin Wooley, Dwarakanathan Ranganathan	A feasibility study comparing topical use of acetic acid at the exit site versus mupirocin to prevent exit site infections (ESI) in peritoneal dialysis (PD) patients (ACES Study)
Kidney Supportive Care Collaborative	<b>Anne Bonner</b> , Louise Purtell (QUT), <b>Helen Healy, Ilse Berquier, Julie Kirby, Carla Scuderi</b>	Kidney Supportive care in the community through access to clinics and information sessions
<b>Helen Healy, Andrew Mallett, Carla Scuderi</b>	Christine Staatz, <b>Helen Healy, George John, Margaret Jacks, Andrew Mallett</b> , Suzanne Parker, Jason Roberts	Innovative blood sampling to reduce the burden of long-term treatment for kidney transplant recipients
<b>Helen Healy, Andrew Mallett, Carla Scuderi</b>	<b>Sadia Jahan, Carla Scuderi</b> , Christine Staatz, <b>Helen Healy, George John, Margaret Jacks, Andrew Mallett</b> , Suzanne Parker, Jason Roberts	An observational pharmacokinetic study of Bactrim® (trimethoprim-sulfamethoxazole) in renal transplant recipients

## 2018 Collaborative Research Activity involving RBWH Research Group / Department

Collaborative Lead Researchers	RBWH Researchers	Research Project Title
Paul Chapman, Jaryth Twine, Sumbal Shahid, <b>William Franks</b>		Antimicrobial prescribing in community acquired pneumonia at Caboolture hospital
David Carr, <b>William Franks</b>		Antimicrobial prescribing in oral health

## 2018 Research Awards and Achievements

Recipient	Award	Event
Melynda Flor	Best First Time Presenter- Research	SHPA Medicines Management 2018. 2018 November 22-25; Brisbane
Nicola Harper	Best Poster	SHPA Medicines Management 2018. 2018 November 22-25; Brisbane
Ian Coombes	William Harris Award	SHPA Medicines Management 2018. 2018 November 22-25; Brisbane

## 2018 Research Grants – Awarded

Investigators <i>(RBWH staff in bold)</i>	RBWH Research Groups/ Departments	Project Title	Granting Body	Amount in 2018	Total Amount <i>(years)</i>
<b>Carla Scuderi, George John</b> , Suzanne Parker, <b>Helen Healy</b> , Christine Staatz, <b>Jason Roberts</b>	Kidney Health Service – Kidney Transplant Research Group	Innovative blood sampling to reduce the burden of long-term treatment for kidney transplant patients	Royal Brisbane and Women's Hospital and Royal Brisbane and Women's Foundation Research	\$39,873	\$39,873 (2018)
<b>K Hurree E. Button</b> , <b>K Whitfield</b>	Pharmacy department (Cancer Care)	Educating Cancer Patients – their way	SEED funding MNHHS	\$82,631	\$82,631 (2018)
Davies M, Irwin A, Parker S, <b>Roberts JA</b>		Optimising the treatment of invasive infection in critically ill neonates, through application of an innovative microsampling approach	Royal Brisbane and Women's Hospital Research Foundation	\$19,040	\$38,081 (2018-2019)
Karamujic N, <b>Roberts JA</b>	(SAFE-ICU) study	Pharmacokinetic and statistical analysis of data from Screening Anti-Fungal Exposure in Intensive Care Units	Royal Brisbane and Women's Hospital Research Foundation	\$20,000	\$40,000 (2018-2019)
Woods M, Harris P, Whiley D, <b>Roberts JA</b> , Lipman J, <b>Hajkowicz K</b> , Redmond A		Rapid detection of resistance genes from gram negative bacteria isolated from blood in ICU-admitted patients to enable timely and effective treatment	Royal Brisbane and Women's Hospital Research Foundation	\$20,000	\$40,000 (2018-2019)
Wainwright C, Bell SC, Wason J, Thomson R, <b>Roberts JA</b> , Coin L, Byrnes J, Tiddens H, Grimwood K, Ahern S		A platform clinical trial approach to the management of Mycobacterium abscessus complex	Medical Research Futures Fund Lifting Clinical Trials and Registries Capacity (LCTRC) grant	\$418,236	\$2,091,178 (2018-2022)
Raby E, Manning L, <b>Roberts JA</b>		An in vitro study of the stability of ceftolozane-tazobactam in elastomeric infusor devices for ambulatory care	Merck Sharp and Dohme Australia	\$48,382	\$48,382 (2018)
Reed S, Lipman J, <b>Roberts JA</b> , Paterson DL, McCombe P, Wallis S		Ion Mobility Separation of challenging clinical samples	University of Queensland Major Equipment and Infrastructure and NHMRC Equipment Grant	\$84,983	\$84,983 (2018)
<b>Roberts JA</b> , Dorofaeff T, Parker S		Advanced treatment of infectious diseases for critically ill children, through innovation in blood sampling	Children's Hospital Foundation Preclinical and Clinical Research Grant	295,445	295,445 (2018)

## 2018 Research Publications

### Journal Articles:

1. **Angela M. North**, Helen L. Barrett, **Karin M. Lust**, **Karen M. Whitfield**. Therapeutic heparin during the peripartum period – challenges associated with safe use. *Journal of Pharmacy Practice and Research*. <https://doi.org/10.1002/jppr.1399>
2. **Andrew Hale**, Greg Merlo, Lisa Nissen, **Ian Coombes** and Nicholas Graves. Cost-effectiveness analysis of doctor-pharmacist collaborative prescribing for venous thromboembolism in high risk surgical patients
3. **Carla Scuderi**, Tilley Pain. Using confidence assessment to explore physiotherapists, dietitians, speech pathologists and occupation therapist knowledge of medicines. *Journal of Interprofessional Care*
4. Purtell L, Sowa M, **Berquier I**, **Scuderi C**, **Douglas C**, **Taylor B**, Kramer K, Hoy W, **Healy H\***, Bonner A\*. The Kidney Supportive Care program: Characteristics of patients referred to a new model of care for advanced chronic kidney disease. *BMJ Supportive and Palliative Care* 2018; in press. \* equal last authors
5. **Scuderi C**, **Berquier I**, Purtell L, **Douglas C**, **Healy H**, Bonner A. Complex prescribing in chronic kidney disease: the role of the renal pharmacist in Kidney Supportive Care uncovering hydralazine-related lupus. *Journal of Pharmacy Practice and Research* 2018; in press
6. Neithe M, **Whitfield K** (2018) Psychotropic Medication use During Pregnancy *Journal of Pharmacy Practice and Research* 48, 384-391
7. **Davies K**, **Coombes I**, Keogh S, **Whitfield K**. (2018) Medication administration evaluation tool design: an expert panel review *Collegian* <https://doi.org/10.1016/j.colegn.2018.05.001>
8. Shanika LGT, Jayamanne S, Wijekoon CN, **Coombes J**, Perera D, Mohamed F, Coombes I, De Silva A, Dawson A. Ward-based clinical pharmacists and hospital readmission: a non-randomized controlled trial in Sri Lanka. *Bulletin of the World Health Organization*. 2018;96(3):155-64
9. **Murphy K**, **Coombes I**, McMillan S, Wheeler AJ. Clozapine and shared care: the consumer experience. *Australian Journal of Primary Health*. 2018;24(6):455-62
10. Cheng V, Abdul-Aziz MH, **Roberts JA**, Shekar K. Overcoming barriers to optimal drug dosing during ECMO in critically ill adult patients. *Exp Opin Drug Metab Toxicol* 2018; in press (date accepted 21<sup>st</sup> December 2018; EOMT-2018-0108.R1)
11. Kerz T, von Loewenich FD, **Roberts JA**, Neulen A, Ringel F. Cerebrospinal fluid penetration of very high-dose meropenem: a case report. *Ann Clin Micro Antimicrob* 2018; in press (date accepted 21<sup>st</sup> December 2018; CMAM-D-18-00234R2)
12. Colin PJ, Allegaert K, Thomson AH, Touw DJ, Dolton M, de Hoog M, **Roberts JA**, Adane ED, Yamamoto Y, García MJ, Simon N, Taccone FS, Lo Y-L, Barcia E, Eleveld DJ. Vancomycin pharmacokinetics throughout life: results from a pooled population analysis and evaluation of current dosing recommendations. *Clin Pharmacokinet* 2018; in press (date accepted 3<sup>rd</sup> December 2018; CPKA-D-18-00151R2)
13. O'Brien D, **Roberts JA**, Cotta MO. Dexmedetomidine prescribing in Australian Intensive Care Units: an observational study. *J Pharm Pract Res* 2018; in press (date accepted 13<sup>th</sup> November 2018; JPPR-2018-May-049; JPPR-2018-May-049)
14. Tenorio-Cañamás T, Grau S, Luque S, Fortún J, Liaño F, **Roberts JA**. Pharmacokinetics of micafungin in critically-ill patients receiving continuous veno-venous hemodialysis with high cut-off membranes. *Ther Drug Monit* 2018; in press (date accepted 24<sup>th</sup> October 2018; TDM018-095)
15. König C, Rohr AC, Frey OR, Brinkmann A, **Roberts JA**, Wichmann D, Braune S, Kluge S, Nierhaus A. Removal of anti-infective agents by a novel cytokine adsorbent system. *Int J Artificial Org* 2018; in press (date accepted 23<sup>rd</sup> October 2018; IJAO-D-18-00065)
16. Lipman J, Brett SJ, DeWaele JJ, Cotta MO, David JS, Finfer S, Glass P, Knowles S, McGuinness S, Myburgh J, Paterson DL, Peake SL, Rajbhandari D, Rhodes A, **Roberts JA**, Shirwadkar C, Starr T, Taylor C, Billot L, Dulhunty JM. A protocol for a Phase 3 multicentre randomised controlled trial of continuous versus intermittent beta-lactam antibiotic infusion in critically ill patients with sepsis: the BLING III trial. *Crit Care Resus* 2018; in press (date accepted 8<sup>th</sup> October 2018; 20180159)
17. Abraham J, Sinnollareddy M, Roberts MS, Williams P, Peake SL, Lipman J, **Roberts JA**. Plasma and interstitial fluid population pharmacokinetics of vancomycin in critically patients with sepsis. *Int J Antimicrob Agents* 2018; in press (date accepted October 1<sup>st</sup>, 2018; IJAA-D-18-00112)
18. Dhaese S, Farkas A, Colin P, Lipman J, Stove V, Verstraete A, **Roberts JA**, De waele JJ. Population pharmacokinetics and evaluation of the predictive performance of pharmacokinetic models in critically ill patients receiving continuous infusion meropenem: a comparison of eight pharmacokinetic models. *J Antimicrob Chemother* 2018; in press (date accepted 26<sup>th</sup> September 2018; JAC-2018-1000.R1)
19. Rawlins M, Cheng V, Raby E, Dyer J, Regli A, Ingram P, McWhinney B, Ungerer J, **Roberts JA**. Pharmacokinetics of ceftolozane-tazobactam during prolonged intermittent renal replacement therapy. *Chemotherapy* 2018; 63:203–206
20. Sime FS, Pandey S, Karamujic N, Parker S, Alexander E, Loutit J, Durso S, Griffith D, Lipman J, Wallis SC, **Roberts JA**. Ex vivo characterisation of effects of renal replacement therapy modalities and settings on pharmacokinetics of meropenem and vaborbactam. *Antimicrob Agents Chemother* 2018; 62(10). pii: e01306-18
21. Wong G, Briscoe S, McWhinney B, Ally M, Ungerer J, Lipman J, **Roberts JA**. Therapeutic drug monitoring of beta-lactam antibiotics in the critically ill: direct measurement of unbound drug concentrations to achieve appropriate drug exposures. *J Antimicrob Chemother* 2018; in press (date accepted 10<sup>th</sup> July 2018; JAC-2017-2004)
22. Sime FB, Stuart J, Butler J, Starr T, Wallis SC, Pandey S, Lipman J, **Roberts JA**. A pharmacokinetic case study of intravenous posaconazole in a critically ill patient with hypoalbuminemia receiving continuous venovenous hemodiafiltration. *Int J Antimicrob Agents* 2018; in press (date accepted July 9<sup>th</sup>, 2018; IJAA-D-18-00564)
23. Dhanani JA, Parker SL, Lipman J, Wallis SC, Cohen J, Fraser J, Barnett A, Chew M, **Roberts JA**. Recovery rates of combination antibiotic therapy using in vitro microdialysis simulating in vivo conditions. *J Pharmaceut Anal* 2018; in press (date accepted 6th July 2018; JPA-D-18-00077)
24. Heil E, Nicolau D, Farkas A, **Roberts JA**, Thom K. Pharmacodynamic target attainment for cefepime, meropenem and piperacillin/tazobactam using a pharmacokinetic/pharmacodynamic-based dosing calculator in critically ill patients. *Antimicrob Agents Chemother* 2018; 62(9). pii: e01008-18
25. Jacobs A, Taccone F, **Roberts JA**, Jacobs F, Cotton F, Wolff F, Creteur J, Vincent JL, Hites M.  $\beta$ -lactam dosage regimens in septic patients with augmented renal clearance. *Antimicrob Agents Chemother* 2018; 62(9). pii: e02534-17

### Journal Articles: (cont):

26. Parker SL, Saxena M, Gowardman J, Lipman J, Myburgh J, **Roberts JA**. Population pharmacokinetics of intravenous paracetamol in critically ill patients with traumatic brain injury. *J Crit Care* 2018; 47:15-20
27. Bukkems LH, Roger C, Hodiament C, Lefrant JY, Juffermans NP, **Roberts JA**, van Hest RM. Predictive performance of a gentamicin population pharmacokinetic model in two Western populations of critically ill patients. *Int J Antimicrob Agents* 2018; 52(2):218-225
28. Tsai D, Stewart P, Hewagama S, Krishnaswamy S, Wallis SC, Lipman J, **Roberts JA**. Optimised dosing of vancomycin in critically ill Australian Indigenous patients with severe sepsis. *Anaesth Intensive Care* 2018; 46(4):374-380
29. Sime FS, Stuart J, Butler J, Starr T, Wallis SC, Pandey S, Lipman J, **Roberts JA**. Pharmacokinetics of intravenous posaconazole in critically ill patients. *Antimicrob Agents Chemother* 2018; 62(6). pii: e00242-18
30. Economou CPJ, Kielstein JT, Czock D, Xie J, Field J, Richards B, Tallott M, Visser A, Koenig C, Hafer C, Schmidt JJ, Lipman J, **Roberts JA**. Population pharmacokinetics of vancomycin in critically ill patients receiving prolonged intermittent renal replacement therapy. *Int J Antimicrob Agents* 2018; 52(2):151-157
31. Gurunathan U, Parker SL, Maguire R, Ramdath D, Bijoor M, Wallis SC, **Roberts JA**. Population pharmacokinetics of periarticular ketorolac in adult patients undergoing total hip or total knee arthroplasty. *Anesth Analg* 2018; in press (date accepted 1<sup>st</sup> March 2018; AA-D-17-02259)
32. Yadav R, Rogers K, Bergen P, Bulitta J, Kirkpatrick CM, Wallis S, Paterson DL, Nation R, Lipman J, **Roberts JA**, Landersdorfer, CB. Optimization and evaluation of piperacillin plus tobramycin combination dosage regimens against *Pseudomonas aeruginosa* for patients with altered pharmacokinetics via the hollow-fiber infection model and mechanism-based modeling. *Antimicrob Agents Chemother* 2018; 62(5). pii: e00078-18
33. Tängden T, Cjutt PG, **Roberts JA**, Pea F. Valganciclovir pharmacokinetics in patients receiving oral prophylaxis following kidney transplantation and model-based predictions of optimal dosing regimens. *Clin Pharmacokinet* 2018; in press (date accepted 6<sup>th</sup> February 2018; CPKA-D-17-00254)
34. Sinnollareddy M, Roberts MS, Lipman J, Peake S, **Roberts JA**. Pharmacokinetics of piperacillin in critically ill patients with acute kidney injury and receiving sustained low efficiency dialysis. *J Antimicrob Chemother* 2018; 73(6):1647-1650
35. Bergen P, Bulitta JB, Sime FB, Lipman J, McGregor MJ, Millen N, Paterson DL, Kirkpatrick CMJ, **Roberts JA**, Landersdorfer CB. Differences in suppression of regrowth and resistance despite similar initial bacterial killing for meropenem and piperacillin/tazobactam against *Pseudomonas aeruginosa* and *Escherichia coli*. *Diagn Microbiol Infect Dis* 2018; 91(1):69-76
36. Braune S, König C, **Roberts JA**, Nierhaus A, Steinmetz OM, Baehr M, Frey OR, Kluge S, Langebrake C. Pharmacokinetics of meropenem in septic patients on sustained low-efficiency dialysis: population pharmacokinetic study. *Crit Care* 2017; 22:25
37. De Waele JJ, Akova M, Antonelli M, Canton R, Carlet J, De Backer D, Dimopoulos G, Garnacho-Montero J, Kesecioglu J, Lipman J, Mer M, Paiva JA, Poljak M, **Roberts JA**, Rodriguez-Bano J, Timsit JF, Zahar JR, Bassetti M. Antimicrobial Resistance and antibiotic stewardship programs in the ICU: insistence and persistence in the fight against resistance. A position statement from ESICM/ESCMID/WAAAR Round Table on Multi-Drug Resistance. *Intensive Care Med* 2018; 44(2):189-196
38. Minichmayr I, **Roberts JA**, Frey O, Roehr A, Kloft C, Brinkman A. Development of a dosing nomogram for continuous infusion meropenem in critically ill patients based on a validated population pharmacokinetic model. *J Antimicrob Chemother* 2018; 73(5):1330-1339
39. Dhaese SAM, **Roberts JA**, Carlier M, Verstraete AG, Stove V, De Waele JJ. Population pharmacokinetics of piperacillin continuous infusion in critically ill patients. *Int J Antimicrob Agents* 2018; 51(4):594-600
40. Byrne C, Parton T, McWhinney B, Fennell J, O'Byrne P, Deasy E, Egan S, Enright H, Desmond R, Ryder S, D'Arcy D, McHugh J, **Roberts JA**. Population pharmacokinetics of total and unbound teicoplanin concentrations and dosing simulations in patients with haematological malignancy. *J Antimicrob Chemother* 2018; 73(4):995-1003
41. Heffernan A, Sime FB, Lipman J, Dhanani J, Andrews K, Ellwood D, Grimwood K, **Roberts JA**. Intrapulmonary pharmacokinetics of antibiotics used to treat nosocomial pneumonia caused by gram-negative bacilli: a systematic review. *Int J Antimicrob Agents* 2018; (date accepted 19<sup>th</sup> October 2018; IJAA-D-18-00639)
42. Heffernan A, Sime FB, Taccone FS, **Roberts JA**. How to optimize PK/PD in Gram-negative infections in critically-ill patients. *Curr Opin Infect Dis* 2018; in press (date accepted 14<sup>th</sup> September 2018; QCO310603)
43. Heffernan A, Sime FB, Lipman J, **Roberts JA**. Individualising Therapy to Minimize Bacterial Multidrug Resistance. *Drugs* 2018; 78(6):621-641
44. Roger C, **Roberts JA**, Muller L. Clinical Pharmacokinetics and Pharmacodynamics of Oxazolidinones. *Clin Pharmacokinet* 2018; ;57(5):559-575
45. Abdul-Aziz MH, Driver E, Lipman J, **Roberts JA**. New paradigm for rapid achievement of appropriate therapy in special populations: coupling antibiotic dose optimisation rapid microbiological methods. *Exp Opin Drug Metab Toxicol* 2018; 14(7):693-708
46. Guerra Valero YC, Wallis SC, Lipman J, Stove C, **Roberts JA**, Parker SL. Clinical application of microsampling vs. conventional sampling in the quantitative bioanalysis of antibiotics. *Bioanalysis* 2018; 10(6):407-423
47. Sartelli M, Kluger Y, **Roberts JA**, Catena F. A Global Declaration on Appropriate Use of Antimicrobial Agents across the Surgical Pathway. *World J Emerg Surg* 2017; 18 (8): 846-53
48. Rawson TM, O'Hare D, Herrero P, Sharma S, Moore LSP, de Barra E, **Roberts JA**, Gordon AC, Hope W, Georgiou P, Cass AEG, Holmes AH. Delivering precision antimicrobial therapy through closed-loop control systems. *J Antimicrob Chemother* 2018; 73(4):835-843
49. Cheng V, Abdul-Aziz MH, **Roberts JA**, Shekar K. Optimising drug dosing in patients receiving extracorporeal membrane oxygenation. *J Thoracic Dis* 2018; 10(Suppl 5):S629-S641
50. Udy AA, **Roberts JA**, Lipman J, Blot SI. The Effects of Major Burn Related Pathophysiological Changes on the Pharmacokinetics and Pharmacodynamics of Drug Use: An Appraisal Utilizing Antibiotics. *Adv Drug Del Rev* 2018; 123:65-74
51. Kumta N, **Roberts JA**, Lipman J, Cotta MOC. Antibiotic distribution into cerebrospinal fluid - can dosing safely account for drug and disease factors in the treatment of ventriculostomy-associated infections? *Clin Pharmacokinet* 2018; 57(4):439-454
52. Paul SK, **Roberts JA**, Lipman J, Deans R, Samanta M. A Robust Statistical Approach to Analyse Population Pharmacokinetic Data in Critically Ill Patients with Renal Impairment. *Clin Pharmacokinet* 2018; in press (date accepted June 6<sup>th</sup>, 2018; CPKA-D-17-00099)



### Journal Articles: (cont):

53. Dhanani J, Cohen J, Parker SL, Chan HK, Tang P, Ahern BJ, Khan A, Bhatt M, Goodman S, Diab S, Chaudhary J, Lipman J, Wallis SC, Barnett A, Chew M, Fraser JF, **Roberts JA**. A research pathway for the study of the delivery and disposition of nebulized antibiotics: an incremental approach from in vitro to large animal models. *Intensive Care Med Exp* 2018; 6(1):17
54. Jamal JA, Roger C, **Roberts JA**. Understanding the impact of pathophysiological alterations during critical illness on drug pharmacokinetics. *Anaesth Crit Care Pain Med* 2018; 515-7
55. Toulouse E, Masseguin C, Lafont B, McGurk G, Harboun A, **Roberts JA**, Granier S, Dupeyron A, Bazin JE. French legal approach to clinical research. *Anaesth Crit Care Pain Med* 2018; 607-14
56. Stewart A, **Roberts JA**, Wallis SC; Allworth AM, Legg A, McCarthy KL. Evidence of clinical response and stability of ceftolozane/tazobactam used to treat a carbapenem-resistant *Pseudomonas aeruginosa* lung abscess on an outpatient antimicrobial program. *Int J Antimicrob Agents* 2018; 51: 941–942
57. Rhodes NJ, Liu J, Lipman J, **Roberts JA**. Author response to: piperacillin-tazobactam: extended infusion vs continuous infusion. *Crit Care Med* 2018; 46(7): e725-e726
58. **Davies, K. M., Coombes, I. D., Keogh, S., & Whitfield, K. M.** Medication administration evaluation tool design: an expert panel review. *Collegian*. doi: 10.1016/j.colegn.2018.05.001
59. Kanji S, **Roberts JA**, Xie J, Alobaid AS, Zelenitsky S, Hiremath S, Zhang G, Watpool I, Porteous R, Patel R. Piperacillin population pharmacokinetics in critically ill adults during sustained low efficiency dialysis. *Ann Pharmacother* 2018; 52(10):965-973
60. Dhanani J, Tang P, Wallis SC, Parker S, Pandey P, Fraser J, Cohen J, Barnett A, **Roberts JA**, Chan HK. Characterisation of 40 mg/ml and 100 mg/ml tobramycin formulations for aerosol therapy with adult mechanical ventilation. *Pulm Pharmacol Ther* 2018; in press (date accepted 9<sup>th</sup> April 2018; YPUPT\_2018\_27)
61. Maseda E, Grau S, Luque S, Castillo-Mafla MDP, Suarez-de-la-Rica A, Montero-Feijoo A, Salgado P, Gimenez MJ, Garcia-Bernedo CA, Gilsanz F, **Roberts JA**. Population pharmacokinetic/ pharmacodynamic of micafungin against *Candida* species in obese, critically ill, and morbidly obese critically ill patients. *Crit Care* 2018; 22(1):94.

## 2018 Conference Presentations – Invited Speaker, Oral and Poster

### Invited Speaker:

1. **Roberts JA**. “Meet the Expert: Treating the treatment: infections in critically ill patients requiring ECMO” European Conference on Clinical Microbiology and Infectious Diseases, Madrid, Spain, April 2018
2. **Roberts JA**. “Do we need beta-lactam TDM or can we just use prolonged infusions?” European Conference on Clinical Microbiology and Infectious Diseases, Madrid, Spain, April 2018
3. **Roberts JA**. “Challenging breakpoints with supranormal dosing: Where is the limit in terms of side effects with higher dosing, and can toxicodynamics help?” European Conference on Clinical Microbiology and Infectious Diseases, Madrid, Spain, April 2018
4. **Roberts JA**. “Posaconazole table and IV formulation: Clinical and Real World Evidence Overview” European Conference on Clinical Microbiology and Infectious Diseases, Madrid, Spain, April 2018
5. **Coombes I**. Professional recognition and credentialing for transforming pharmaceutical care – Pharmacy: transforming outcomes! At 78<sup>th</sup> FIP World Congress of Pharmacy and Pharmaceutical Sciences, Glasgow, UK, 2-6 September 2018
6. **Roberts JA**. “Population PK – an introduction”. Antimicrobial Pharmacokinetic-Pharmacodynamics (PKPD) Workshop, Kuala Lumpur, Malaysia, September 2018
7. **Roberts JA**. “Therapeutic Drug Monitoring of beta-lactams in ICU – is this ready for prime time?” Antimicrobial Pharmacokinetic-Pharmacodynamics (PKPD) Workshop, Kuala Lumpur, Malaysia, September 2018
8. **Roberts JA**. “Antibiotic dosing and optimization”. Antibiotic Masterclass, University of Malaya, Kuala Lumpur, Malaysia, September 2018
9. **Whitfield K, Coombes I, Hale A** Building team and personal resilience. Life Long Learning Pharmacists 12 International Conference Brisbane Australia (workshop). Proceedings of the 2018 44<sup>th</sup> SHPA National Conference, November 2018 Brisbane
10. **Roberts JA**, “Leadership: Never give up, great things take time” Medicines Management 2018, Society of Hospital Pharmacists of Australia National Conference, Sydney, Australia November 2018.
11. **Davies, K. M.**, “Be Safe, Be Accountable and Be Confident” presentation. Ausmed Medicines and Midwives Conference 2018. Brisbane, Australia
12. **Harper N, Tai B, Stowasser D**. Time-and-motion study on nursing time before and after Pyxis implementation in an Emergency Department
13. **Franks W** Antimicrobial stewardship for nurse practitioners. Australian college of nurse practitioner’s national seminar, Brisbane.

### Oral Presentations:

1. **Midori Nakagaki, Elise Button, Amy Keating**, Chris Mitchell, Jody Marsh, Andrew Birchley and **Glen Kennedy**. The evaluation of hyperhydration for high dose melphalan in stem cell transplantation. EBMT March 2018
2. Zhang H, **Scuderi C, Eglinton, J, Broadbent, T.**, Jones, S., & **Mallett, A.** (2018). Sensipar<sup>®</sup> instead of surgery: is it a sensible option? Paper presented at Renal Society of Australasia, 46<sup>th</sup> annual conference, 21-23 June, Adelaide.
3. **Whitfield K, Coombes I, Hale A, Tessier C** Building team and personal resilience. Life Long Learning Pharmacists 12 International Conference Brisbane Australia (workshop)
4. **I Coombes, P Donovan**, C Noble C Mitchell Supporting junior doctor prescribers’ learning through self-assessment and feedback. Health Care Round table Annual conference. 20<sup>th</sup> & 21<sup>st</sup> of June 2018 – Sydney
5. **Coombes I, Whitfield K, Hale A**. Why Implement a Structured Competency and Portfolio of Impact Based, Performance Development Program When an OSCE Will Do? Life Long Learning in Pharmacy, Brisbane, 6<sup>th</sup> – 9<sup>th</sup> July 2018.



### Oral Presentations: (cont):

6. **Winckel K, Coombes J, Woodruff G**, Cheng V. Evaluation tools for identifying gaps in knowledge and practice: advantages and disadvantages of observational and non-observational tools. Life Long Learning in Pharmacy, Brisbane, 6<sup>th</sup>-9<sup>th</sup> July 2018.
7. **Turkington J**, Noble C, Molloy E, **Coombes I**. Using scholarly approaches to enhance interprofessional feedback practices for junior doctor prescribing. Life Long Learning in Pharmacy, 6<sup>th</sup>-9<sup>th</sup> July 2018.
8. **McCourt, E.**, Watson, K., Patounas, M. Working together: using disaster table-top exercises to teach interprofessional collaboration. At 78<sup>th</sup> FIP World Congress of Pharmacy and Pharmaceutical Sciences, Glasgow, Scotland, 2-6 September 2018
9. **Hale A** et al (Capacity and Capability Working Group, SHPA) Research competence-targeting identified gaps to build research capability and capacity. Accepted for presentation at FIP International Conference, Glasgow 2<sup>nd</sup>-6<sup>th</sup> September 2018
10. Olenski S, **Scuderi C**, Jeyaseelan L, **John G**, Clinical audit of urinary tract infections in renal transplant patients at the Royal Brisbane and Women's Hospital 54<sup>th</sup> Australian and New Zealand Society of Nephrology (ANZSN), September, Sydney, 2018
11. **Amy Keating, Midori Nakagaki, Jason Butler**. Collaboratively Managing a patient with a body surface area of 3.3 through HSCT for MDS. Blood October 2018
12. **Melynda Flor** Is a UK-trained accuracy checking pharmacy assistant as proficient and efficient as an Australian Pharmacist? SHPA Medicines Management Conference Brisbane 23-26 November 2018
13. **Whitfield K, Coombes I, Hale A** Building team and personal resilience. Life Long Learning Pharmacists 12 International Conference Brisbane Australia (workshop). Proceedings of the 2018 44<sup>th</sup> SHPA National Conference, November 2018 Brisbane
14. **Coombes I, Hale A, Barras M, Woodruff G, Hendy A, Whitfield K** OSCEs or Portfolios: why implement a structured competency based, performance development program with a portfolio of impact, when an OSCE will do? SHPA Medicines Management Conference Brisbane 23-26 November 2018
15. **Silvestro D**. RBWH experience of portfolio evaluation and feedback from first cohort of residents. SHPA Medicines Management Conference Brisbane 23-26 November 2018
16. **Midori Nakagaki, Elise Button, Amy Keating**, Chris Mitchell, Jody Marsh, Andrew Birchley and **Glen Kennedy**. The evaluation of hyperhydration for high dose melphalan in stem cell transplantation. SHPA Medicines Management Conference Brisbane 23-26 November 2018
17. **Davies K. M, Coombes I. D, Keogh S**, Hay K, Hurst C, **Whitfield K.M**. "Medication Administration Evaluation and Feedback Tool: Simulation Intra-rater and Inter-rater Validation" presentation. The National Nursing Forum 2018. Gold Coast, Australia
18. **Davies KM, Coombes ID, Keogh S, Whitfield K.M**. "Medication administration evaluation tool design: an expert panel review" Nursing and Midwifery Conference Presentation 2018. Brisbane, Australia.

### Poster Presentations:

1. **Melynda Flor**, Centaine L. Snoswell, **Cameron Tessier, Sunita Rantanjee, Dr Andrew Hale**, Andrew Matthews, Prof Lisa Nissen, **A/Prof Ian Coombe**. Is a UK-trained accuracy checking pharmacy assistant as proficient and efficient as an Australian Pharmacist?
2. **Angela M. North**, Helen L. Barrett, **Karin M. Lust, Karen M. Whitfield**. Therapeutic Anticoagulation during the Peripartum Period: a Survey of Clinical Practice. Waddell J, Nissen L and **Hale A**. The Personality Traits of Australian Pharmacy Students [abstract]. Proceedings of the 12<sup>th</sup> International Life Long Learning in Pharmacy Conference; 2018 Jul 7-9; Brisbane, Queensland. Brisbane: Lifelong Learning Conferences International Planning Committee
3. Waddell J, Nissen L, **Hale A** and Kyle G. Nature or nurture: using the BFI to evaluate the personality traits of Australian pharmacy students [abstract]. Proceedings of the 78<sup>th</sup> World Congress of Pharmacy and Pharmaceutical Sciences; 2018 Sep 2-8; Glasgow, Scotland. Scotland: International Pharmacy Federation
4. Waddell J, Nissen L, **Hale A** and Kyle G. An evaluation of the personality traits of Australian Pharmacists using the Big Five Inventory [abstract]. Proceedings of the 75<sup>th</sup> World Congress of Pharmacy and Pharmaceutical Sciences; 2018 Sep 2-8; Glasgow, Scotland. Scotland: International Pharmacy Federation
5. **Withers J, Coetzee R**, Hui Shin Choon, **Coombes I, Eglington J, Hale A**. Assessing the Impact and Feasibility of Pharmacist Attendance on Post-Take Ward Rounds
6. **Katina Black, Jesseca Eglington**, Linda Prentice, Sophie Lloyd, Carlos Fernandez, **Serena Rofail**. Flexible diuretic plans: utilisation in heart failure across the healthcare continuum ACRA 2018 (Australia Cardiovascular Health and Rehabilitation Association) 28<sup>th</sup> Annual Scientific Meeting
7. Tina Ha, Dr John Atherton, Claire Douglas, Leonie Mok, Leigh Robertson, **Serena Rofail**, Simon Shah, **Lyndsay Steel**, Bronwyn Wood. Sacubitril-Valsartan: snap-shot of a new heart failure medication CSANZ 2018 (Cardiac Society of Australia and New Zealand) 66<sup>th</sup> Annual Scientific Meeting
8. **Turkington J**, Noble C, Molloy E, **Coombes I**. Hospital pharmacists' engagement with feedback in interdisciplinary workplace setting: a Scoping Review. Medicines Management, November 2018.
9. **Caitlin McGarry, Jesseca Eglington, Lyndsay Steel, Serena Rofail, Lisa Allard** Pharmacist contributions on the cardiology post-take ward round SHPA Qld Branch Cardiology Symposium 2018
10. **Jesseca Eglington and Lyndsay Steel** a Partner in medication management and safety: A review of the addition of a pharmacist to the Cardiology Outpatient Clinics CSANZ 2018 (Cardiac Society of Australia and New Zealand) 66<sup>th</sup> Annual Scientific Meeting
11. **Lyndsay Steel and Lisa Allard** Oral anticoagulation dose and adjustment advice. A retrospective review of pharmacist communication at discharge. CSANZ 2018 (Cardiac Society of Australia and New Zealand) 66<sup>th</sup> Annual Scientific Meeting
12. **Lyndsay Steel and Lisa Allard** Anticoagulation in the era of NOACs. An audit of Prescribing Errors in Non-Valvular Atrial Fibrillation CSANZ 2018 (Cardiac Society of Australia and New Zealand) 66<sup>th</sup> Annual Scientific Meeting
13. **Coombes, Ian** "Perspectives from Australian practitioners on professional recognition and credentialing: changing careers" 2018 FIP Congress in Glasgow
14. **Bonnie Tai, Nicola Harper, Danielle Stowasser** Imprest supply timing before and after Pyxis implementation in four Queensland Emergency Departments

## Poster Presentations (cont):

15. **Turkington J**, Noble C, Molloy E, **Coombes I**. Hospital pharmacists' engagement with feedback in interdisciplinary workplace setting: a Scoping Review. *Medicines Management*, November 201
16. **Hendy A**, **Coombes I**, **Woodruff G**. Is our money where our mouth is? Do action plans get actioned?
17. **Trenerry H**, **Lander C**. Can low-dose methotrexate cause seizures? SHPA 44<sup>th</sup> National Medicines Management Conference. November 22-25, Brisbane 2018
18. **Trenerry H**. Development and evaluation of a residency program in medicines information. SHPA 44<sup>th</sup> National Medicines Management Conference. November 22-25, Brisbane 2018
19. **Varitimos M**, **Hale A**, **Legg A**. Vancomycin Training for Pharmacists – a Pilot Program. *Life Long Learning in Pharmacy*, Brisbane, 6<sup>th</sup>-9<sup>th</sup> July 2018
20. Waddell J, Nissen L and **Hale A**. The Personality Traits of Australian Pharmacy Students. *Life Long Learning in Pharmacy Conference*, Brisbane, 6<sup>th</sup>-9<sup>th</sup> July 2018
21. **McCourt, E.**, Tippet, V., Nissen, L., & Singleton, J. (2018). Are pharmacists prepared for disaster? A systematic literature review. Poster presented at 78<sup>th</sup> FIP World Congress of Pharmacy and Pharmaceutical Sciences, Glasgow, Scotland, 2-6 September
22. **McCourt, E.**, Tippet, V., Nissen, L., & Singleton, J. (2018). Exploring Australian pharmacists' perceived preparedness to respond to disasters. Poster presented at 78<sup>th</sup> FIP World Congress of Pharmacy and Pharmaceutical Sciences, Glasgow, Scotland, 2-6 September
23. Waddell JJ, Nissen LM, Kyle GJ and **Hale AR**. An evaluation of the personality traits of Australian pharmacists using the Big Five Inventory – FIP, Glasgow Sept 2018
24. Waddell JJ, Nissen LM, Kyle GJ and **Hale AR**. Nature versus nurture: using the BFI to evaluate the personality of Australian pharmacy student. FIP, Glasgow Sept 2018
25. **McCourt, E.** (2018). Pharmacists involvement in pandemic influenza planning and response in Australia. Poster presented at IHF World Hospital Congress, Brisbane, Australia, 10-12 October
26. **Nakagaki M**, **Johnstone S**. Advanced Technician in a Specialised Bone Marrow Transplant Pharmacy Clinic. *Cancer Care Research Retreat*, November 2018
27. **McIlwain J**, **Rantucci M**. Glucarpidase: Treatment for Methotrexate Toxicity. *Cancer Care Research Retreat*, November 2018
28. **McCourt, E**, Tippet, V., Nissen, L., & Singleton, J. (2018). What factors affect Australian pharmacists' preparedness for disasters? Poster presented at 44<sup>th</sup> SHPA Medicines Management Conference, Brisbane, Australia, 22-25 November
29. **Scuderi C**, Olenski S, **John G**, Choo A, Singh A, Way M, Jeyaseelan L. Clinical audit of urinary tract infections in renal transplant patients. Poster at: *Medicines Management 2018*. 2018 November 22-25; Brisbane
30. **Rice M**, Goie H, **Scuderi C**, **Ironside D**, **Zipf J**. Proton pump inhibitor use and chronic kidney disease- a clinical audit. *Medicines Management 2018*. 2018 November 22-25; Brisbane
31. **Ironside D**, **Scuderi C**, Eglinton J, **Rice M**, **Millhouse S**, **Kark A**. Case series: hypocalcaemia requiring hospitalisation following administration of denosumab in chronic kidney disease (CKD) patients. *Medicines Management 2018*. 2018 November 22-25; Brisbane
32. **Nakagaki M**, **Johnstone S**. Advanced Technician in a Specialised Bone Marrow Transplant Pharmacy Clinic. 44<sup>th</sup> SHPA Medicines Management Conference, Brisbane, Australia, 22-25 November
33. **Midori Nakagaki**, **Elise Button**, **Amy Keating**, Chris Mitchell, Jody Marsh, Andrew Birchley and **Glen Kennedy**. The evaluation of hyperhydration for high dose melphalan in stem cell transplantation. 44<sup>th</sup> SHPA Medicines Management Conference, Brisbane, Australia, 22-25 November.
34. **Davies K.M**, **Coombes I.D**, **Keogh S**, Hay K, Hurst C, **Whitfield K.M**. "Medication Administration Evaluation and Feedback Tool: Intra-rater and Inter-rater Using Simulation" poster. SHPA Medicines Management 2018. 2018 November 22-25; Brisbane
35. Gardiner, KM, **McCourt, E.**, Watson, K., & Serrano Santos, M. (2018). Kahoot! Identifying where students need support in a large multidisciplinary clinical therapeutics unit. Poster presented to APSA Annual Conference, Adelaide, Australia, 2-5 December
36. **Davies K.M**, **Coombes I.D**, **Keogh S**, **Whitfield K.M**. "Medication Administration Evaluation and Feedback Tool: Supporting Safe Medication Practice" poster. RBWH Symposium 2018. Brisbane, Australia
37. **Davies K.M**, **Coombes I.D**, **Keogh S**, Hay K, Hurst C, **Whitfield K.M**. "Medication Administration Evaluation and Feedback Tool: Intra-rater and Inter-rater Using Simulation" poster. RBWH Symposium 2018. Brisbane, Australia.

## Other Communications and Outputs:

### Symposiums:

**Berquier I**, **Douglas C**, **Healy H**, **Scuderi C**, **Bonner A**. (QUT), **Heffernan, D.**, Purcell, L. (UQ), (2018) *Kidney Supportive Care Symposium, RBWH*.

**Baboolal K**, **Mallet A**, **Berquier I**, **Rice M**, Hoy W (QUT), **Cameron A**, **Healy H**. (2018) *Statewide Renal Clinical Network Forum – Renal Service: Putting Consumers First*, Queensland State Library, Brisbane, QLD.

**McCourt E**. Improving pharmacist involvement in pandemic influenza planning and response in Australia. *Deeble Institute Issues Brief*.

**Silvestro D**, **Busuttin L**, **Pattullo C** *Warfarin bridging with unfractionated heparin infusion in pre-operative patients; how are we doing?* 27<sup>th</sup> RBWH Healthcare Symposium.

### ACADEMIC APPOINTMENTS 2018

**Carla Scuderi** Course Coordinator University of Qld Clinical Pharmacy Post graduate program.

# Department of Rheumatology

## 2018 Current RBWH Research Group / Department Led Research Activity

RBWH Research Group/ Department Lead Researchers	Collaborative Researchers	Research Project Title
Dr Philip Robinson	Nil	Gout Genetics

## 2018 Research Publications

### Journal Articles:

1. **Philip C. Robinson.** Gout – an update of aetiology, genetics, co-morbidities and management. *Maturitas* 2018; 118:67-73 (IF 3.32)
2. **Philip Robinson** and Nicola Dalbeth. Febuxostat for the treatment of hyperuricaemia in gout. *Expert Opinion on Pharmacotherapy* 2018 e-published 19<sup>th</sup> July 2018 (IF 3.53)
3. Roberts RL, Wallace MC, Harrison AA, White D, Dalbeth N, Stamp LK, Ching D, Highton J, Merriman TR, **Robinson PC**, Brown MA, Stebbings SM. (2018) Association of Crohn's disease-related chromosome 1q32 with ankylosing spondylitis is independent of bowel symptoms and faecal calprotectin. *PeerJ* 6: e5088 <https://doi.org/10.7717/peerj.5088>
4. David Bursill... **Philip Robinson**... Nicola Dalbeth. Gout, Hyperuricemia and Crystal-Associated Disease Network (G-CAN) consensus statement regarding labels and definitions for disease elements in gout. *Arthritis Care & Research*, in press May 2018 (IF 3.32)
5. **Philip C Robinson**, Nicola Dalbeth and Peter Donovan. The cost effectiveness of six-monthly serum urate monitoring after reaching target in people with gout: a health economic analysis comparing biannual or annual monitoring to no monitoring. *Journal of Rheumatology* 2018;45(5):697-704 (IF 3.24)
6. LA Bradbury, KA Hollis, BGautier, S Shankaranarayana, **PC Robinson**, N Saad, KA Lê Cao, MA Brown. Diffusion-Weighted Imaging is a Sensitive and Specific MRI Sequence in the Diagnosis of Ankylosing Spondylitis. *Journal of Rheumatology* 2018;45(6):771-778 (IF 3.24)
7. Kathleen Morrisroe, Ayano Nakayama, Jason Soon, Mark Arnold, Les Barnsley, Claire Barrett, Prof. Peter M Brooks, Stephen Hall, Patrick Hanrahan, Dr Pravin Hissaria, Graeme Jones, Veera Srividya Katikireddi, Helen Keen, Rodger Laurent, Mandana Nikpour, Katherine Poulsen, **Philip Robinson**, A/Prof Muriel Soden, Nigel Wood, Nicola Cook, Catherine Hill and Rachelle Buchbinder. EVOLVE: The Australian Rheumatology Association's 'top five' list of investigations and interventions doctors and patients should question. *Internal Medicine Journal* 2018;48(2):135-143. (IF 1.90)
8. Matthew A. Brown, Paul A. Bird, **Philip C. Robinson** et al. Evaluation of the effect of baseline MRI sacroiliitis and C reactive protein status on etanercept treatment response in non-radiographic axial spondyloarthritis: a post hoc analysis of the EMBARK study. *Annals of the Rheumatic Diseases* 2018;77(7):1091-1093 (IF 12.81)
9. Paul Kubler. Fast-tracking of new drugs: getting the balance right. *Aust Prescr* 2018; 41: 98-9.

## Sexual Health and HIV Services

A good year for Research within Sexual Health and HIV Service.

QPREP – Queensland State-wide research project for the implementation of Pre-exposure Prophylaxis for the prevention of HIV transmission. Commenced January 2017 and closed in November 2018. Sexual Health and HIV Service has a large recruitment site.

### 1. HIV Prevention

QPREP – Queensland Government State-wide research project for the implementation of Pre-exposure Prophylaxis for the prevention of HIV transmission. Commenced January 2017 and closed in November 2018. PrEP added to PBS in April 2018.

**Evidence of reduction in new HIV cases in 2017-2018.**

### 2. Multidrug resistance *Mycoplasma Genitalium*

In 2017-2018 the emergence of multidrug resistance in *Mycoplasma Genitalium*, has led to significant complexity in treatment regimens. The work with UQCCR and Queensland Pathology with the public funded sexual health and HIV clinics (Ongoing).

**Achievements – Molecular resistance platforms to guide treatment options.**

## 2018 Current RBWH Research Group / Department Led Research Activity

RBWH Research Group/Department Lead Researchers	Collaborative Researchers	Research Project Title
Sexual Health and HIV Service, Julian Langton-Lockton	<b>E.L. Sweeney, E. Trembizki, C. Bletchly, C.S. Bradshaw, A. Menon, F. Francis, J., Langton-Lockton, G.R. Nimmo, D.M. Whiley</b>	Levels of <i>Mycoplasma genitalium</i> antimicrobial resistance differ by both region and gender in the state of Queensland, Australia: implications for treatment guidelines
SHHS Julian Langton-Lockton, Queensland Positive People, Metro North Public Health Unit	SHHS, Metro North Public Health Unit, Queensland Positive People	LINK funding – Testing to Treatment, Closing the Circle

## 2018 Research Publications

### Journal Articles:

1. J Clin Microbiol. 2019 Jan 2. pii: JCM.01555-18. doi: 10.1128/JCM.01555-18
2. Levels of *Mycoplasma genitalium* antimicrobial resistance differ by both region and 2 genders in the state of Queensland, Australia: implications for treatment guidelines. Authors: E.L. Sweeney, E. Trembizki, C. Bletchly, C.S. Bradshaw, A. Menon, F. Francis, **J. Langton-Lockton, G.R. Nimmo, and D.M. Whiley.**

## Other Communications and Outputs:

### Ongoing projects:

1. AHOD-Australasian HIV Observation Data – Ongoing site for Project nationwide, Kirby Institute UNSW
2. Cease – Kirby – Control and Eradication within Australia of Hepatitis C from people living with HIV
3. Start – Kirby – Comparing early initiation of ART with deferred ART
4. Thrive – We did SSA but never recruited anyone (UQ) Tobacco harm reduction with vaporised nicotine
5. AHOD – Kirby
6. Long term non progressor (last patient off after June VL 11500) Also a Kirby study.

## Queensland State-wide Antimicrobial Stewardship Program

The research highlights for the Queensland State-wide Antimicrobial Stewardship Program were the collaboration of the Hot North Project which is quantifying and assessing appropriateness of antimicrobial prescribing practice in remote Aboriginal primary health care clinics across northern Australia.

### 2018 Collaborative Research Activity involving RBWH Research Group / Department

Collaborative Lead Researchers	RBWH Researchers	Research Project Title
Prof Jodie McVernon	Dr Kathryn Daveson	Hot North project

### 2018 Research Grants – Awarded

Investigators (RBWH staff in bold)	RBWH Research Groups/ Departments	Project Title	Granting Body	Amount in 2018	Total Amount (years)
<b>Dr Kathryn Daveson</b>	Queensland Statewide Antimicrobial Stewardship Program	Hot North	Menzies	\$36,000	
Dr Minyon Avent	Queensland Statewide Antimicrobial Stewardship Program	An innovative Antimicrobial Stewardship Program for children in remote and regional areas: optimising antibiotic use through early intravenous-to-oral conversion	Children's Health Foundation	\$95,000	

### 2018 Research Publications

#### Journal Articles:

- Avent ML**, Fejzic J, van Driel M 'An underutilised resource for Antimicrobial Stewardship: a 'snapshot' of the community pharmacists' role in delayed or 'wait and see' antibiotic prescribing'. *International Journal of Pharmacy Practice*. 2018;26; 4:373-375
- Avent, Minyon L.**, Rogers, Benjamin A., Cheng, Allen C., Athan, Eugene, Francis, Joshua R., Roberts, Matthew J., **Paterson, David L., Harris, Patrick N. A.**. Fosfomycin: what was old is new again: Editorial. *Internal Medicine Journal*. 2018;48(12):1425-1429 • DOI: 10.1111/imj.14122.

### 2018 Conference Presentations – Invited Speaker, Oral and Poster

#### Invited Speaker:

- Avent, ML.** Supporting rural and regional prescribers: antibiotic optimisation in 'the bush'. National Antimicrobial Resistance and Stewardship Forum 2 November 2018
- McNamara S.** AMS: widening the collaborative approach presented to the Antimicrobial Stewardship: getting it right the first-time workshop Medicines Management – 44<sup>th</sup> Society of Hospital Pharmacists of Australia (SHPA) National Conference, Brisbane, 22-25 November 2018
- Avent M.** AMS monitoring at the bedside and providing feedback to prescribers AMS interventions presented to the Antimicrobial Stewardship: getting it right the first-time workshop Medicines Management – 44<sup>th</sup> Society of Hospital Pharmacists of Australia (SHPA) National Conference, Brisbane, 22-25 November 2018.

#### Oral Presentations:

- Avent ML**, Fejzic J, van Driel M 'An underutilised resource for Antimicrobial Stewardship: a 'snapshot' of the community pharmacists' role in delayed or 'wait and see' antibiotic prescribing'. Presented to the Antimicrobials 2018 scientific meeting on 23<sup>rd</sup>-25<sup>th</sup> February 2018, Brisbane, Queensland
- Avent, ML, Handy A, Waddell E., Hajkowicz K and Daveson K.** Tackling antibiotic shortages: a statewide approach presented to the Antimicrobials 2018 scientific meeting on 23<sup>rd</sup>-25<sup>th</sup> February 2018, Brisbane, Queensland
- Waddell E, McNamara S, Avent M.L., Hajkowicz K & Daveson K.L.** Evaluation of an innovative model of care to promote quality use of antibiotics by rural and remote clinicians presented to Statewide Rural and Remote Clinical Network Forum 6 June 2018
- Waddell E, Daveson K, McNamara S.** 'Connecting the Dots: Developing Quality Improvement skills in rural areas for the optimisation of the use of antibiotics'. Royal Brisbane & Women's Hospital 27<sup>th</sup> Annual Healthcare Symposium, 11-13 September 2018
- Waddell E and Daveson K.** Assessing Prescribing in Small Australian Hospitals. The Patient Journey. presented to the Medicines Management – 44<sup>th</sup> Society of Hospital Pharmacists of Australia (SHPA) National Conference, Brisbane, 22-25 November 2018.

#### Poster Presentations:

- Waddell E and Daveson K.** Assessing Prescribing in Small Australian Hospitals. The Patient Journey presented to the Antimicrobials 2018 scientific meeting on 23<sup>rd</sup>-25<sup>th</sup> February 2018, Brisbane, Queensland
- Avent, ML, Daveson K, Graham N, Clark JE.** Prevalence survey of the use and appropriateness of antimicrobial prescribing for children in regional and remote areas presented to Australasian Society for Infectious Diseases 10 to 12 May 2018, Gold Coast, Queensland.



# Department of Thoracic Medicine

Research carried out by department members in 2018 covers the fields of lung cancer, interstitial lung disease, respiratory physiology and asthma.

## 2018 Research Grants – Awarded

Investigators ( <i>RBWH staff in bold</i> )	RBWH Research Groups/ Departments	Project Title	Granting Body	Amount in 2018	Total Amount (years)
<b>Assoc Prof David Fielding</b>	RBWH Thoracic Medicine	Improving lung cancer diagnosis through genomic testing of cytology smears	Cancer Australia	\$400,000	\$400,000 (2018-2019)
<b>Assoc Prof David Fielding</b>	RBWH Thoracic Medicine	Improving lung cancer diagnosis through genomic testing of cytology smears	Cancer Council of Qld	\$100,000	\$100,000 (2018)

## 2018 Research Publications

### Journal Articles:

- Fielding D** et al. Diff-Quik cytology smears from Endobronchial Ultrasound Transbronchial Needle Aspirate Lymph Node Specimens as a source of DNA for Next Generation Sequencing instead of cell blocks. *Respiration* 2018 In press DOI: 10.1159/000495661
- Fielding DI; Travers J; Nguyen P; Brown MG; Hartel G; Morrison S**, Expiratory reactance abnormalities in patients with expiratory dynamic airway collapse: a new application of impulse oscillometry. *ERJ Open Research [ERJ Open Res]*, ISSN: 2312-0541, 2018 Nov 12; Vol. 4 (4); Publisher: European Respiratory Society; PMID: 30443553
- Langton D; Ing A; **Fielding D**; Wang W; Plummer V; Thien F, Bronchodilator responsiveness as a predictor of success for bronchial thermoplasty. *Respirology (Carlton, Vic.) [Respirology]*, ISSN: 1440-1843, 2019 Jan; Vol. 24 (1), pp. 63-67;
- Pattison A**; Cook A; Singh M; Nandakumar L; Ravi Kumar A; **Fielding D** EBUS-TBNA Cytology Specimens are Predictive of Occupational Dust Exposure in Patients With Bilateral Mediastinal and Hilar Lymphadenopathy. *Journal Of Occupational And Environmental Medicine [J Occup Environ Med]*, ISSN: 1536-5948, 2018 Oct; Vol. 60 (10), pp. 880-885; Publisher: Lippincott Williams & Wilkins; PMID: 29995650
- Diaz ME; Debowski M; Hukins C; **Fielding D**; Fong KM; Bettington CS, Non-small cell lung cancer brain metastasis screening in the era of positron emission tomography-CT staging: Current practice and outcomes. *Journal Of Medical Imaging And Radiation Oncology [J Med Imaging Radiat Oncol]*, ISSN: 1754-9485, 2018 Jun; Vol. 62 (3), pp. 383-388; Publisher: Wiley-Blackwell Pub. Asia; PMID: 29745036
- Fielding D**; Kurimoto N Endobronchial Ultrasound-Guided Transbronchial Needle Aspiration for Diagnosis and Staging of Lung Cancer. *Clinics In Chest Medicine [Clin Chest Med]*, ISSN: 1557-8216, 2018 Mar; Vol. 39 (1), pp. 111-123; Publisher: Elsevier Health Science
- Fielding D** Tissue is the issue to confirm benign disease at pleuroscopy in lung cancer. *Respirology (Carlton, Vic.) [Respirology]*, ISSN: 1440-1843, 2018 Feb; Vol. 23 (2), pp. 126-127; Publisher: Blackwell Science; PMID: 29168601
- Fielding DI**; Schuster DD Distinguishing Bronchoscopic Changes of Mitral Stenosis From Carcinoma In Situ With Narrow Band Imaging. *Journal Of Bronchology & Interventional Pulmonology [J Bronchology Interv Pulmonol]*, ISSN: 1948-8270, 2018 Jul; Vol. 25 (3), pp. 231-234; Publisher: Wolters Kluwer Health/Lippincott Williams & Wilkins; PMID: 27070339
- Jo HE, Glaspole I, Goh N, Hopkins PMA, Moodley Y, Reynolds PN, Chapman S, Walters EH, **Zappala C**, Allan H, Macansh S, Grainge C, Keir GJ, Hayen A, Henderson D, Klebe S, Heinze SB, Miller A, Rouse HC, Duhig E, Cooper WA, Mahar AM, Ellis S, McCormack SR, Ng B, Godbolt DB, Corte TJ. Implications of the diagnostic criteria of idiopathic pulmonary fibrosis in clinical practice: Analysis from the Australian Idiopathic Pulmonary Fibrosis Registry. *Respirology*. 2018 Oct 17. doi:10.1111/resp.13427. [Epub ahead of print] PubMed PMID: 30328644
- Jo HE, Glaspole I, Moodley Y, Chapman S, Ellis S, Goh N, Hopkins P, Keir G, Mahar A, Cooper W, Reynolds P, Haydn Walters E, **Zappala C**, Grainge C, Allan H, Macansh S, Corte TJ. Disease progression in idiopathic pulmonary fibrosis with mild physiological impairment: analysis from the Australian IPF registry. *BMC Pulm Med*. 2018 Jan 25;18(1):19. doi: 10.1186/s12890-018-0575-y. PubMed PMID: 29370786; PubMed Central PMCID: PMC5785886
- Bui DS, Lodge CJ, Burgess JA, Lowe AJ, Perret J, Bui MQ, Bowatte G, Gurrin L, Johns DP, Thompson BR, Hamilton GS, Frith PA, James AL, Thomas PS, Jarvis D, Svanes C, Russell M, **Morrison SC**, Feather I, Allen KJ, Wood-Baker R, Hopper J, Giles GG, Abramson MJ, Walters EH, Matheson MC, Dharmage SC. Childhood predictors of lung function trajectories and future COPD risk: a prospective cohort study from the first to the sixth decade of life. *Lancet Respir Med*. 2018 Jul;6(7):535-544. doi: 10.1016/S2213-2600(18)30100-0. Epub 2018 Apr 5. PubMed PMID: 29628376
- Perret JL, Matheson MC, Gurrin LC, Johns DP, Burgess JA, Thompson BR, Lowe AJ, Markos J, **Morrison S**, McDonald CF, Wood-Baker R, Svanes C, Thomas PS, Hopper JL, Giles GG, Abramson MJ, Walters EH, Dharmage SC. Childhood measles contributes to post-bronchodilator airflow obstruction in middle-aged adults: a cohort study. *Respirology*. 2018 Aug;23(8):780-787. doi: 10.1111/resp.13297. Epub 2018 Mar 20. PubMed PMID: 29560611.

## 2018 Conference Presentations – Invited Speaker, Oral and Poster

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### Oral Presentations:

1. Perret J, Bowatte G, **Morrison S**, Dharmage S et al. Nitrogen dioxide is adversely associated with transfer factor of carbon monoxide in a dose-response manner. SANZ Annual Scientific Meeting, Adelaide, March 2018
2. Bui D, Walters H, **Morrison S**, Dharmage S et al. Middle-age lung function decline is predominantly influenced by adult factors and their interactions with childhood and genetic factors. TSANZ Annual Scientific Meeting, Adelaide, March 2018
3. **Skinner T, Churton J, Edwards T, Bashirzadeh F, Zappala C, Hundloe J, Tan H, Pattison A, Fielding D**. Diagnostic accuracy of bronchoscopy with conscious sedation versus general anaesthetic in a randomised prospective cohort. TSANZ Annual Scientific Meeting, Adelaide, March 2018.

### Poster Presentations:

1. **Olive G, Byrnes R, Bashirzadeh F, Fielding D**. Prospective objective audit of safety of transbronchial cryobiopsy in a single Australian centre using the Bronchoflex endotracheal tube. TSANZ Annual Scientific Meeting, Adelaide, March 2018
2. **Olive G, Byrnes R, Singh M, Bashirzadeh F, Fielding D**. High diagnostic yield of transbronchial cryobiopsy includes focal pathologies and is enhanced by EBUS. TSANZ Annual Scientific Meeting, Adelaide, March 2018
3. Rodwell L, Schneider I, McElrea M, **Brown M**. A culturally appropriate indigenous spirometry training program – a means to improve quantity and quality of spirometry performed in primary care. ANZSRS Annual Scientific Meeting, Adelaide, March 2018
4. **Leong M, Brown M, Ritchie A, Samaratunga D**. Encouraging nasal/nasal pillow masks during initial titration reduces recommended CPAP pressures and improves titration outcomes. Sleep Down Under, Brisbane, October 2018
5. **Galt L, Ritchie A**. Safety of feeding tube insertion in MND patients. Sleep Down Under, Brisbane, October 2018
6. Perret J, Bowatte G, **Morrison S**, Dharmage S et al. Relationships between nitrogen dioxide exposure, post-bronchodilator airflow obstruction and gas transfer in middle-age. European Respiratory Society Annual Scientific Meeting, Paris, September 2018.