

2023 RBWH Research Report

Research Services



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Research and Implementation Services

Herston Health Precinct Symposium

The 2023 Herston Health Precinct Symposium was held from Monday 4th September to Thursday 7th September at the RBWH Education Centre. Over the four-day event the program covered topics from digital health, advances in models of disease, advances in cardiovascular health, the growing challenge of obesity and the future of cancer care in Queensland. Innovation was examined across the whole of the healthcare journey, from the roots of ill health in childhood to the use of new technology to adapt and recover from illness in later life. A debate was also held on how our healthcare system, and its focus on hospital beds, needs to be reconfigured for the needs of the future.

Highlights Included:

Keynote sessions covering topics such as,

- Superbug Solutions
- Novel MRI observations of brainstem function in Health and Diseases marked by fatigue
- Lessons learnt from the MRFF cardiovascular mission
- The Australian child maltreatment study

Special presentations were held by Professor Nicole Marsh discussing the development and implementation of the cancer nurse's society Australian guidelines. A consumer engagement workshop was held on the Wednesday which included ceasing the day with a consumer and community networking event.

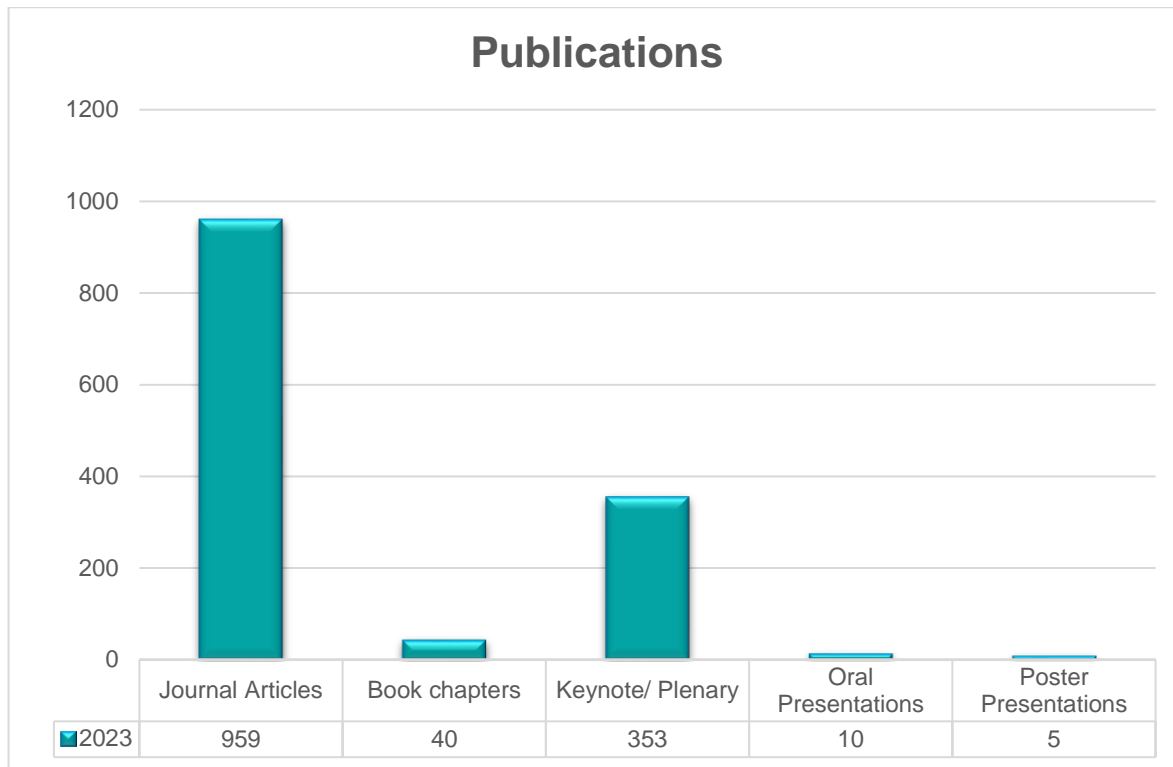
This year a total of 131 abstracts were submitted, 55 of which were selected for oral presentations during the event. These submissions competed for a number of awards and our 2023 winners are:

- **Dr Stephen Morrison Award for Best Clinical Research**
Nicole Marsh, 'Securing Central lines in Intensive Care: A multicentre randomised controlled trial (RCT)'
- **Professor Lawrie Powell AC Early Career Research Award**
Nicholas Green 'Optimisation of a Semi-Automated Custom HTO Surgical Guide'
- **Professor Jeffrey Lipman AM for Best Translational Research Into Practice Award**
Bree-Yana McConnochie, 'Enteral Probiotics for the Prevention of Ventilator Associated Pneumonia in Mechanically Ventilated, Adult ICU Patients'
- **Professor William Egerton Award for Best Discovery and Innovation Research**
Shashwat Mishra, 'Automation of the 3D modelling and corrective anatomical measurements workflow in Lower Limb Malalignment'

We would like to take this opportunity to thank all those involved in bringing together this year's Symposium – without their efforts this event would not have been possible. Thank you also to all those who made an effort to attend, either in person or virtually.



RBWH Research Output



The Centre for Palliative Care Research and Education



Professor Patsy Yates
Director
Centre for Palliative Care Research and Education

The primary role of the Centre for Palliative Care Research and Education (CPCRE) is to enhance palliative care services in Queensland through research and education endeavours. To achieve these aims, CPCRE operates as a 'centre without walls', committed to building and fostering partnerships with the palliative care community in its endeavours.

Highlights of 2023:

Medicinal Cannabis research program update. Prof Janet Hardy and colleagues continue to run a medicinal cannabis research program involving 4 metropolitan hospitals in South East Queensland: Royal Brisbane and Women's Hospital, Princess Alexandra Hospital, St Vincent's Private Hospital Brisbane and the Mater Adult Hospitals. The first trial of cannabidiol (CBD) oil vs placebo showed that CBD does not provide any extra symptom benefit over and above that provided by palliative care alone (Journal of Clinical Oncology, Nov 2022). The results of this trial have been disseminated widely and have triggered international interest. The second trial of a 1:1 CBD/THC product versus placebo has been completed and the data is being analysed. In a third study of a 1:20 THC/CBD product we will work with Telehealth Research to offer trial participation to rural and remote areas of Queensland.

CPCRE staff have continued collaborative research projects in 2023. Research projects are multi-disciplinary and are across institutions (within Queensland and across Australia), and results have been published in national and international peer reviewed publications. CPCRE staff hold appointments on state, national and international Palliative Care/Oncological & Nursing and Medical advisory boards/reference groups.

CPCRE education activities include: the General Practice Palliative Care Education Program; the Program of Experience in the Palliative Approach; the Evidence Based Palliative Care Strategy; the Queensland Palliative Care Research Group & Workforce Development Programs. The Centre disseminates palliative care education and research information to health professionals via: the CPCRE Website, CPCRE Newsletter (quarterly), CPCRE Calendar (biannually), CPCRE E-Bulletins (bimonthly), the Annual Research Conference & the Annual Update Symposium (topic rotates 3 yearly between general medicine, oncology and supportive care); the Master Class Series and the Annual Nurse Practitioner Symposium.

Benefits for clinical practice:

The Centre's work focuses on:

- Developing the capacity of the palliative care workforce to provide quality palliative care
- Improving the links between research and practice in palliative care
- Promoting palliative care research to inform care and support novice researchers in the sector
- Providing information which supports the delivery of palliative care services

Successful PhD candidates in 2023

Name	PhD Title	Month Completed	Affiliated University	Summary
Piyada Chairi	Assessing family care needs of children with cancer in Thailand: developing a Thai version of the Family Inventory of Needs-Paediatric II (FIN-PED II)	May 2023	QUT (2018-2023) Patsy Yates, Natalie Bradford	This thesis was the first study to develop and test the Thai version of Family Inventory of Need-Paediatric II. The study used an exploratory sequential mixed-method and was conducted in three phases. The findings are a promising step in the development of a multi-dimensional needs assessment tool that will be useful for researchers, healthcare professionals, and policymakers who wish to assess the family care needs of Thai parents with children with cancer.

Research Awards and Achievements

Recipient (RBWH staff in bold)	Award	Event
Hardy, J	Mater Research Special Award for outstanding achievements and contribution as Cancer Program Lead	Mater Research Showcase, Brisbane Conference Centre, 10 th November 2023

Research Grants

Investigator Names (RBWH staff in bold)	RBWH Departments / Research Groups	Research Project Title	Granting Body	Total Awarded (whole all years)	Length of Awards in years and years active
Bradford, N., Ekberg, S., Brain, D., Yates, P. , & Hassall, T	Centre for Palliative Care Research and Education	Childhood brain cancer survivorship and palliative care effects on family functioning (CASPER)	Children's Health Foundation Queensland	\$400,056	6 years, 2020-2025
Beesley, V., Neale, R., Turner, J., Yates, P. , Wyld, D., Chan, R. & Gordon, L	Centre for Palliative Care Research and Education	PRoCESS: Pancreatic cancer Relatives Counselling and Education Support Service trial	National Health and Medical Research Council, Medical Research Future Fund	\$801,229	4 years, 2020-2023
Willmott, L., White, B. & Yates, P	Centre for Palliative Care Research and Education	Services to develop and provide online voluntary assisted dying participating practitioner training	Department of Health (WA)	\$996,165	4 years, 2020-2023
Chan, R., Yates, P. , Emery, J., Koczwara, B., Mann, G., Eakin, E., Turner, M., Krishnasamy, M., Gordon, L., Skerman, H	Centre for Palliative Care Research and Education	Implementation of a nurse-enabled, shared-care follow-up model of early Breast cancer survivorS (The IBIS-Survivorship Study)	National Health and Medical Research Council (APP1170519)	\$1,490,635	5 years, 2021-2025
Chan, R., Emery, J., Yates, P. , Dunn, J.C., Hart, N., Koczwara, B., Gordon, L., Jefford, M., Vela, I., Jones, L., Davis, I., Sengupta, S., Ee, C., Halcomb, E., Rhee, J., Sara, S., Hemming, K., Pryor, D., Shub, M & Raupach, A	Centre for Palliative Care Research and Education	A Hybrid, Implementation-Effectiveness Trial of a Nurse-Enabled, Shared-Care Model Between Primary and Acute Care for proStatE Cancer Survivors (The MOSES Trial)	National Health and Medical Research Council MRFF (MRF2006113)	\$1,667,960	4 years, 2021-2024
Yates, P. , Rego, J., Ash, K	Centre for Palliative Care Research and Education	Paediatric Palliative Education Curricular	Children's Health Queensland Hospital and Health Service	\$51,449	1 year, 2022-2023

Investigator Names (RBWH staff in bold)	RBWH Departments / Research Groups	Research Project Title	Granting Body	Total Awarded (whole all years)	Length of Awards in years and years active
Virdun, C., Matthews, R., Mudge, A.M., Yates, P. , Singh, G., Phillips, J., Carter, H	Centre for Palliative Care Research and Education	Improving the quality of hospital care for people with serious illness through patient experience measurement and feedback informing facilitated ward-based improvement: an implementation pilot study (The PREM-QUAL study)	Metro North Hospital and Health Service	\$24,696	3 years, 2022-2024
Webb, P., Chan, R., Brown, B., Wyld, D., Gordon, L.G., Hartel, G., Eastgate, M.A., Wishart, L., Nund, R., Yates, P	Centre for Palliative Care Research and Education	PROMISE: Patient-Reported Outcome Measures in cancer care: a hybrid effectiveness-Implementation trial to optimise Symptom control and health service Experience	Cancer Council Queensland – Accelerating Collaborative Cancer Research Grants	\$196,625	3 years, 2021-2023
Hardy, J. , Good, P., Lintzeris, N., Martin, J., Yates, P. , Chye, R., Haywood, A., Olsen, R	Centre for Palliative Care Research and Education	Medicinal cannabinoids to relieve symptom burden in the palliative care of patients with advanced cancer (MedCan 1)	The Commonwealth of Australia, Department of Health MRFF (APP1152232)	\$1,363,040	6 years, 2018-2023
Good, P., Hardy, J. , Haywood, A., Olson, R., Greer, R., Philip, J., Yates, P. & Mendis, R	Centre for Palliative Care Research and Education	Medicinal Cannabis (MedCan 3) – randomised, multicentre, double blind, placebo-controlled trial to assess THC/CBD (1:20) to relieve symptom burden in patients with cancer	National Health and Medical Research Council MRFF (APP2006191)	\$1,526,796	5 years, 2021-2025
Yates, P	Centre for Palliative Care Research and Education	Optimising palliative care services to deliver better value health care for older persons	National Health and Medical Research Council Investigator Grant (APP2009529)	\$1,500,000	6 years, 2021-2026
Hudson, P., Philip, J., Francis, J., De Abreu Lourenco, R., Juraskova, I., Gray, K., Jefford, M., Kapp, S., Coher, J., Al's: Phillips, J., Yates, P. , Athan, S., Brown, L., De Vleminck, A., Chang, S., Thomas, K	Centre for Palliative Care Research and Education	Improving the wellbeing of people with advanced cancer and their family carers: An effectiveness-implementation trial of an Australian dyadic digital health intervention (FOCUSau)	National Health and Medical Research Council TCR into End-of-Life Care (APP2006170)	\$1,095,278	5 years, 2021-2025
Hardy, J. , Good, P	Centre for Palliative Care Research and Education	Data Management Grant	Cancer Council Queensland	\$82,000	2023 (reviewed yearly)
Gurgenci, T., Hardy, J. , Good, P., Moniruzzaman, M., & Begun J	Centre for Palliative Care Research and Education	Medicinal cannabis inflammation and symptoms in advanced cancer	2022 TRI LINC Scheme grant	\$49,988	5 years, 2022-2026
Currie, A., Hooper, K., Alexander, K. & Yates, P	Centre for Palliative Care Research and Education	Social, Spiritual and Emotional Korumba for Aboriginal and Torres Strait Islander People at End of Life	St Vincent's Private Hospital Northside	\$30,000	1 year, 2023-2024

Investigator Names (RBWH staff in bold)	RBWH Departments / Research Groups	Research Project Title	Granting Body	Total Awarded (whole all years)	Length of Awards in years and years active
Menant, J., Sturniek, D., Parks, S., Goldstein, D., Lord, S., Davis, J., Mizrahi, D., Koczwara, B., Grimison, P. & Yates, P	Centre for Palliative Care Research and Education	Cognitive-motor step training to reduce chemotherapy-induced peripheral neuropathy (CIPN) symptoms in cancer survivors	National Health and Medical Research Council CTCS (GNT2023730)	\$808,942	4 years, 2023-2026

Current RBWH Department / Research Group Led Research Activity

Lead Investigator Name (RBWH staff in bold)	Other Study Investigators (RBWH staff in bold)	Research Project Title	Number of RBWH Patients Recruited in 2023
Yates, P	Yates, P. , Alexander, K., Miaskowski, C., Chan, R., McCarthy, A., McPhail, S., Wyld, D., Skerman, H	A sequential multiple assignment randomised trial (SMART) of nursing interventions to reduce pain associated with chemotherapy induced peripheral neuropathy	0
Hardy, J	Hardy, J. , Good, P., Lintzeris, N., Martin, J., Yates, P. , Chye, R., Haywood, A., Olsen, R	Oral Medicinal Cannabinoids to Relieve Symptom Burden in the Palliative Care of Patients with Advanced Cancer: a double-blind, placebo controlled, randomised clinical trial of efficacy and safety of 1:1 delta-9-tetrahydrocannabinol (THC) and Cannabidiol	2
Hardy, J	Hardy, J. , Good, P., Huggett, G	Exploratory analysis of post-trial use of medicinal cannabis	0

Collaborative Research Activity Involving RBWH Department / Research Group

Lead Investigator Name (RBWH staff in bold)	Other Study Investigators (RBWH staff in bold)	Research Project Title	Number of RBWH Patients Recruited in 2023
Good, P.	Good, P., Hardy, J. , Haywood, A., Olsen, R., Greer, R., Philip, J., Yates, P. , Mendis, R., Gurgenci, T.	Medicinal Cannabis (MedCan 3) – randomised, multicentre, double-blind, placebo-controlled trial to assess THC/CBD (1:20) to relieve symptom burden in patients with cancer	0

Research Publications

Authors

Investigator	ORCID ID
Patsy Yates	https://orcid.org/0000-0001-8946-8504
Janet Hardy	https://orcid.org/0000-0003-1127-9951

Publications in 2023

Journal Articles (RBWH staff in bold)

Chambers, S., Spooner, A., Parker, C., Jack, L., Schnitker, L., Beattie, E., **Yates, P.** & MacAndrew, M. Clinical indicators of acute deterioration in persons who reside in residential aged care facilities: A rapid review. *Journal of Nursing Scholarship*, (2023), 55: 365-377

Journal Articles (RBWH staff in bold)

Shin, J., Kober, K., Wong, M.L., **Yates, P.** & Miaskowski, C. Systematic review of the literature on the occurrence and characteristics of dyspnea in oncology patients. *Clinical Reviews in Oncology/Hematology*, (2023), 181, 103870

Shin, J., Kober, K.M., Wong, M.L., **Yates, P.**, Cooper, B.A., Paul, S.M., Hammer, M., Conley, Y., Levine, J.D. & Miaskowski, C. Distinct shortness of breath profiles in oncology outpatients undergoing chemotherapy. *Journal of Pain and Symptom Management*, (2023), 65(3), 242-255

Ong, J.A., Rego, J., Ung, T., Kumar, S., Ash, K., Saini, B & **Yates, P.** Palliative care education in an Australian undergraduate pharmacy curriculum: an exploratory descriptive study. *International Journal of Pharmacy Practice*, (2023), 31(2), 218-224

Daveson, B.A., Blanchard, M., Davis, W.R., Connolly, J., Clapham, S., William, L., Kaltner, M., Currow, D.C., **Yates, P.**, Clark, K. & Eagar, K. Considering community care in public health responses: A national study regarding palliative care during a prolonged coronavirus disease 2019 lockdown. *Australian and New Zealand Journal of Public Health*, (2023), 47(2), 1-8

Fox, A., Thamm, C., Crawford-Williams, F., Joseph, R., Cardiff, L., Thoms, D., Nissen, L., **Yates, P.** & Chan, R.J. What workforce preparation is required for successful implementation of nurse prescribing under supervision? *Collegian*, (2023), 30(2), 300-305

Shin, J., Kober, K.M., **Yates, P.**, Wong, M.L. & Miaskowski, C. Multifactorial model of dyspnea in patients with cancer. *Oncology Nursing Forum*, (2023), 50(3), 397-415

Desselle, M.R., Holland, L.R., McKittrick, A., Kennedy, G. **Yates, P.** & Brown, J. "A Wanderer's Tale": The development of a virtual reality application for pain and quality of life in Australian burns and oncology patients. *Palliative and Supportive Care*, (2023), 21(3), 454-460

Dunn, P.J., Griffiths, L.R., **Yates, P.**, Haupt, L.M. & Alexander, K.E. GSTM1 and GSTT1 polymorphisms associated with pain in a chemotherapy-induced peripheral neuropathy cohort. *Journal of Cancer Research and Clinical Oncology*, (2023), 149(10), 7405-7412

Wiwaranukool, P., Chan, R.J. & **Yates, P.** The effects of an educational intervention on exercise advice behaviours of Thai oncology nurses. *Seminars in Oncology Nursing*, (2023), 39(4), 151453

Willmott, L., Feeney, R., Del Villar, K., **Yates, P.** & White, B. Voluntary assisted dying: A discussion of key legal issues for Australian nurses. *Collegian*, (2023), 30(5), 701-707

Liu, W.-H., Fox, J. & **Yates, P.** Work-related experiences of prostate cancer survivors in Australia: a qualitative study. *BMC Public Health*, (2023), 23(1): 1806

Chan, R.J., Agbejule, O.A., Crawford-Williams, F., **Yates, P.M.**, Koczwara, B., Erickson, J., So, W.K.W. & Howell, D. Development of an international competency framework for nurses in the provision of self-management support to cancer populations. *Cancer Nursing*, (2023), 46(6), 477-487

Button, E., Baniahmedi, S., Chambers, S. & **Yates, P.** Addressing the end-of-life actions in the National Safety and Quality Health Service Standards (2nd edn): a national survey. *Australian Health Review*, (2023), 47(5), 574-585

Shin, J., Kober, K., **Yates, P.**, Wong, M.L., Cooper, B.A., Paul, S.M., Hammer, M., Conley, Y., Levine, J.D., Wright, F & Miaskowski, C. Higher lifetime stress and symptom burden contribute to the occurrence of shortness of breath. *Seminars in Oncology Nursing*, (2023), 39(5), 151471

Feeney, R., Willmott, L., Neller, P., Then, S.-N., **Yates, P.** & White, B. Online modules to improve health professionals' end-of-life law knowledge and confidence: a pre-post survey study. *BMC Palliative Care*, (2023), 22:165

Virdun, C., Button, E., Phillips, J.L., **Yates, P.** & Lockett, T. Perspectives of inpatients with palliative care needs, their families, clinicians and key stakeholders on measuring quality of hospital care via patient experience measures: A qualitative study. *Palliative Medicine*, (2023), 37(10), 1498-1508

Delaforce, A., Farmer, S., Duff, J., Munday, J., Miller, K., Glover, L., Corney, C., Ansell, G., Gutta, N., Tuffaha, H., **Hardy, J.**, Hurst, C. Results from a type two hybrid-effectiveness study to implement a preoperative Anemia and iron deficiency screening, evaluation and management pathway. *Transfusion*, (2023), 63:724–736. DOI: 10.1111/trf.17287

Olson, R.E., Smith, A., Good, P., Dudley, M., Gurgenci, T., **Hardy, J.** 'What price do you put on your health?': medical cannabis, financial toxicity and patient perspectives on medication access in advanced cancer. *Health Expectations*, (2023), 26: 160-171. doi:10.1111/hex.13642

Sandford, A., Haywood, A., Rickett, K., Good, P., Khan, S., Foster, K., **Hardy, J.R.** Corticosteroids for the management of cancer-related fatigue in adults with advanced cancer. *Cochrane Database of Systematic Reviews*, (2023), Issue 1. Art. No.: CD013782. DOI: 10.1002/14651858.CD013782.pub2

Hardy, J., Greer, R., Huggett, G., Kearney, A., Gurgenci, T., Good, P. Phase IIb Randomized, Placebo-Controlled, Dose-Escalating, Double-Blind Study of Cannabidiol Oil for the Relief of Symptoms in Advanced Cancer (MedCan1-CBD). *Journal of Clinical Oncology Nov*, (2023), Mar 1;41(7):1444-1452. doi: 10.1200/JCO.22.01632. Epub 2022 Nov 21. PMID: 36409969
Clinical Trial

Journal Articles (RBWH staff in bold)

Smith, A., Olson, R.E., da Costa, N.C., Cuerton, M., **Hardy, J.**, & Good, P. Quality of life beyond measure: Advanced cancer patients, wellbeing and medicinal cannabis. *Sociology of Health and Illness*, (2023); 45:1709-1729 Jun 7. doi: 10.1111/1467-9566.13684. Online ahead of print

Lee, C.Y., Good, P., Huggett, G., Greer, R., **Hardy, J.** Drug dependence epidemiology in palliative care medicinal cannabis trials. *BMJ Supportive & Palliative Care*, (2023), Sep 25:spcare-2023-004583. doi: 10.1136/spcare-2023-004583. Epub ahead of print. PMID: 37748856

Gurgenci, T., Kijanka, G., Greer, R., Huggett, G., Good, P., Moniruzzaman, M., **Hardy, J.** Exploring potential anti-inflammatory effects of medicinal cannabis. *Support Care Cancer*, (2023), Oct 14:31(12):629. <https://doi.org/10.1007/s00520-023-08069-8>.

Book Chapters (RBWH staff in bold)

Doyle-Lindrud, S., & **Yates, P.** (2023) Cancer. In Brown, D., Edwards, H., Buckley, T. & Aitken R. (Eds.) *Lewis's Medical-Surgical Nursing: Assessment and Management of Clinical Problems* (6th Ed.). Elsevier Australia, Sydney, pp.318-344.

Keynote or Plenary Lectures given in 2023

Date	Title
Conference Presentations	
26/04/2023	Yates, P. Data science/biomarkers (Break-out Session Lead). Precision Health Symptom Science Symposium, ONS Congress 2023, San Antonio, USA, 26 th April 2023
15/06/2023–17/06/2023	Virdun, C., Philips, J., Luckett, T., Button, E. & Yates, P. Capturing inpatients' with palliative care needs and their carers' real-time experiences: a feasibility and acceptability study. European Association of Palliative Care 18 th World Congress 2023, Netherlands, 15 th – 17 th June 2023
01/07/2023–05/07/2023	Yates, P. Palliative Care Outcomes Collaboration (PCOC)'s Palliative care quality improvement program. Symposium 11: Communication, Integration, and Promotion of Global Development of Palliative Care. International Council of Nurses Congress, Montreal, Canada, 1 st – 5 th July 2023
02/07/2023–05/07/2023	Pace, J., Ong, J.A., Rego, J., Ung, T., Kumar, S., Ash, K., Saini, B. & Yates, P. Palliative care education in an Australian undergraduate pharmacy curriculum: an exploratory descriptive study. International Life Long Learning in Pharmacy Conference, Denver, Colorado, USA, 2 nd – 5 th July 2023
03/08/2023	Yates, P. Evidence based practice in oncology nursing. 6 th Asian Oncology Nursing Society Conference, Bali, Indonesia, 3 rd August 2023
09/08/2023	Yates, P. Speed Leaders Session. The Australian College of Nursing National Nursing Forum, Adelaide, Australia, 9 th August 2023
13/09/2023–15/09/2023	Ekberg, S., Yates, P. , Ekberg, K., McLarty, A., Singh, G., Bradford, N., Bowers, A., Dettrick, Z. & Herbert, A. Paediatric palliative care across Australia: Clinical and demographic characteristics and need. Oceanic Palliative Care Conference 2023, Sydney, Australia, 13 th – 15 th September 2023
13/09/2023–15/09/2023	Virdun, C., Button, E., Phillips, J., Yates, P. & Luckett, T. Consumer and clinician preferences for measuring palliative care quality: A qualitative study. Oceanic Palliative Care Conference 2023, Sydney, Australia, 13 th – 15 th September 2023
13/09/2023–15/09/2023	Singh, G., Matthews, R., Mudge, A., Yates, P. , Phillips, J.L. & Virdun, C. Understanding experience of care quality from hospitalised patients with palliative care needs and their carers: A prospective observational study. Oceanic Palliative Care Conference 2023, Sydney, Australia, 13 th – 15 th September 2023
13/09/2023–15/09/2023	Yates, P. The End of Life Directions in Aged Care Linkages Program: A national model for improving the quality of end of life care. Oceanic Palliative Care Conference 2023, Sydney, Australia, 13 th – 15 th September 2023
13/09/2023–15/09/2023	Yates, P. (Panel Member) With the end in mind-building stronger health systems across Australia and the Oceanic region. Oceanic Palliative Care Conference 2023, Sydney, Australia, 13 th – 15 th September 2023
29/09/2023–02/10/2023	Yates, P. Opportunities and challenges associated with development of cancer nursing leadership. Workshop "Develop and Strengthen Nursing Leadership in Cancer Care and Control: A Call to

	Action", International Conference on Cancer Nursing 2023, Glasgow, Scotland, 29 th September – 2 nd October 2023
29/09/2023–02/10/2023	Yates, P. Launch of ISNCC materials. Special Symposium "Metastatic Breast Cancer – New Therapies, New Challenges", International Conference on Cancer Nursing 2023, Glasgow, Scotland, 29 th September – 2 nd October 2023
13/10/2023	Yates, P. Session Chair. Keynote Address by Professor Sir Michael Marmot CH FMedSci FBA. Annual Conference of the Academy of Health and Medical Sciences, Brisbane, Australia, 13 th October 2023
20/10/2023–23/10/2023	Yates, P. Designing and evaluating cancer survivorship models. 1 st Midwifery Education and Research International Conference (Guangdong Nurse Association), Virtual, Dongguan City, Guangdong Province, China, 20 th – 23 rd October 2023
16/11/2023–19/11/2023	Yates, P. Advances in Symptom Management. 2023 Chinese Congress of Holistic Integrative Oncology, Tianjin, China, 16 th – 19 th November 2023
19/11/2023	Yates, P. Precision Nursing: Application to Cancer Care. 2023 World Young Scientist Summit – the 7 th International Nursing Academic Conference, Wenzhou, Zhejiang, China, Virtual, 19 th November 2023
15/02/2023–16/02/2023	Hardy, J. Randomised, placebo-controlled, double-blind trials of medicinal cannabis for symptom management in patients with advanced cancer. CT-Cann2023: 2 nd International Congress on Clinical trials on Cannabis, Canary Wharf, London, United Kingdom, 15 th – 16 th February 2023
15/06/2023–17/06/2023	Hardy, J., Greer, R., Kearney, A., Gurgenci, T., Good, P. Randomised, placebo controlled, dose-escalating, double-blind studies of medicinal cannabis for symptom management in patients with advanced cancer. European Association of Palliative Care (EAPC) 18 th World Congress, De Doelen, Rotterdam, the Netherlands, 15 th – 17 th June 2023. (Presented and published as abstract FC7.6 in Palliative Medicine, Jun (2023), 37,1, supplement, 1-302)
23/11/2024–24/11/2024	Hardy, J. Medicinal cannabis – where has the dust settled. Brisbane Cancer Conference 2023, Palliative Care Workshop, Brisbane Convention Centre, Brisbane, Australia, 23 rd – 24 th November 2023
Poster Presentations	
22/06/2023–24/06/2023	Crichton, M., Dissanayaka, T., Marx, W., Isenring, E., Gamage, E., Travica, N., Bowers, A., Yates, P. & Marshall, S. Does medicinal cannabis support the mental health of cancer survivors?: A systematic review and meta-analysis of intervention studies. MASCC/JASCC/ISOO 2023 Annual Meeting, Nara, Japan, 22 nd – 24 th June 2023
22/06/2023–24/06/2023	Crichton, M., Dissanayaka, T., Marx, W., Isenring, E., Gamage, E., Travica, N., Bowers, A., Yates, P., Koczwara, B & Marshall, S. Safety and efficacy of medicinal cannabis in management of pain, sleep, and fatigue in cancer survivors: A systematic review and meta-analysis of randomised controlled trials. MASCC/JASCC/ISOO 2023 Annual Meeting, Nara, Japan, 22 nd – 24 th June 2023
13/09/2023–15/09/2023	Rego, J., Hunt, C., Ash, K., Wetzig, S., Wynne, K. & Yates, P. Our palliative care journey into future – proposal for narrative story. Oceanic Palliative Care Conference 2023, Sydney, Australia, 13 th – 15 th September 2023
Other Presentations	
14/06/2023	Yates, P. NHMRC grant reviewer – Do's & don'ts. Grant-Writing Workshop for Early-Career Researchers, CNSA Pre-Congress Symposium 2023, Adelaide, Australia, 14 th June 2023
22/06/2023	Yates, P. (Panel Member) People and perceptions in palliative care: workforce insights event. Melbourne, Australia, 22 nd June 2023
13/09/2023	Yates, P. Policy: Consideration for Nurse Leaders. ACN Institute of Leadership Program, Sydney, Australia, 13 th September 2023
28/11/2023–29/11/2023	Yates, P. Education and Training – The palliative care education and training landscape. National Palliative Care Projects Grant Recipients Forum, Canberra, Australia, 28 th – 29 th November 2023
15/02/2023	Hardy, J. Medicinal cannabis: pot or panacea? Seminar series. Marie Curie Palliative Care Research Department, Division of Psychiatry, University College London, United Kingdom, 15 th February 2023
23/02/2023	Hardy, J. Medicinal cannabis: pot or panacea? Northern Ireland Hospice, Belfast, Northern Ireland, 23 rd February 2023

31/08/2023	Hardy, J. Medicinal cannabis: pot or panacea? CPCRE Nurse Practitioner Symposium, Royal Brisbane and Women's Hospital, Herston, Australia, Virtual, 31 st August 2023
19/09/2023	Hardy, J. Trials and Tribulations. Hospital Universitaires de Geneve Palliative Care Research Symposium, Bellerive Hospital, Geneva, Switzerland, 19 th September 2023

Herston Imaging Research Facility (HIRF)

Research Highlights

Herston Imaging Research Facility (HIRF) is a research focused service, continuing to provide state-of-the-art infrastructure in MRI, PET/CT and PET/MR and in 2023 3D surface and ultrasound imaging was added to the portfolio. It provides technical support on imaging protocols and analysis and research support for ethics and governance.

In 2023 the staff of HIRF brainstormed a rethink of the strategy. In addition to working as a team, as an alliance of RBWH, The University of Queensland and Queensland University of Technology, our vision needed to reflect that of our partners. With input from academic, allied health and management streams we developed a strategic vision “Innovative Translational Research in Healthcare” with the purpose “To provide cutting edge imaging technologies and expertise, to support meaningful reform in health care delivery”.

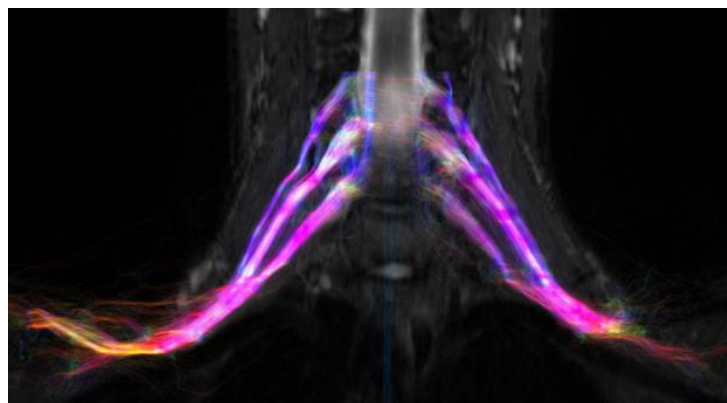
This reflected our mission to be a research imaging capability connected to clinical needs at RBWH. HIRF does not compete with the image science capabilities on the university campuses, nor does HIRF compete with the clinical imaging departments in the hospital. Much activity in 2023 was directed to outreach to the RBWH community. HIRF is committed to:

- i) implementing innovative and emerging imaging technologies to address unanswered clinical questions,
- ii) supporting clinical trials so that RBWH patients don't miss out on novel therapies
- iii) being a conduit between basic research at our universities and real-world clinical questions

HIRF supports many RBWH-led and collaborative studies. One project, a collaboration between breast surgeons at RBWH, the Herston Biofabrication Institute and industry partners, is a clinical trial to evaluate medical-grade breast scaffold implants with autologous fat grafting for breast restoration surgery. In collaboration with the Jameison Trauma Institute, advanced imaging was applied to identify the denervation of the brachial plexus. The HIRF team developed a protocol to better visualise optic nerve compression in base-of-skull tumours. Another project, led by RBWH clinicians, evaluated patient-specific applicators for brachytherapy treatments. The 3D surface imaging system, the VECTRA, was Investigated for its utility in follow up of extracorporeal photopheresis (ECP) in cutaneous T cell lymphoma (CTCL) patients. The high-resolution MRI was used to evaluate perineural spread in head and neck cancers.

HIRF provides imaging to support a range of clinical trials. In 2023, HIRF supported trials investigating new treatments for diseases such as mantle cell and high-grade B cell lymphoma, lymphocytic leukemia, hemophilia B, multiple sclerosis, thyroid cancer, Alzheimer's disease, myelofibrosis, chronic sinusitis, emphysema, and prostate cancer. Trials, investigating new diagnostic tools to further evaluate clinical pathways were conducted in inclusion body myositis, breast cancer, prostate cancer, epilepsy, head and neck cancers, urological cancer, Hodgkin lymphoma, traumatic brain injury and radiotherapy treatments.

The user base includes a wide range of researchers, with over 62 studies in 2023, resulting in 69 papers in high impact journals such as Neuron, Lancet Oncology and the British Medical Journal. HIRF also has a mission to support the development of the next generation of clinical researchers, through activities at the HDR, undergraduate and secondary high school levels.



Successful PhD candidates in 2023

Name	PhD Title	Month Completed	Affiliated University	Summary
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Reported in the other departments

Research Awards and Achievements

Recipient (RBWH staff in bold)	Award	Event
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Professor Owen Ung	2023 Chief Executive Award RBWH	2023 Research excellence awards
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Research Grants

Investigator Names (RBWH staff in bold)	RBWH Departments / Research Groups	Research Project Title	Granting Body	Total Awarded (whole all years)	Length of Awards in years and years active
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Dr Phil Mosley	Mental Health	Treatment of Obsessive-Compulsive Disorder with Transcranial Focused Ultrasound	MRFF	\$289,870	2 years, 2023-2025
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Prof Katie McMahon, Prof Graham Galloway	HIRF	Portable point of care magnetic resonance imaging (PoCeMR)	National Imaging Facility	\$114,636	2 years, 2022-2024
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Prof Katie McMahon, Prof Graham Galloway	HIRF	Portable point of care magnetic resonance imaging (PoCeMR)	RICF State funding	\$57,825	2 years, 2022-2024
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All other grants using HIRF are reported in the other department summaries.

Current RBWH Department / Research Group Led Research Activity

Lead Investigator Name (RBWH staff in bold)	Other Study Investigators (RBWH staff in bold)	Research Project Title
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HIRF is a research service centre and supports projects outside the department.

Collaborative Research Activity Involving RBWH Department / Research Group

Lead Investigator Name (RBWH staff in bold)	Other Study Investigators (RBWH staff in bold)	Research Project Title	Number of RBWH Patients Recruited in 2023
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Dr Trevor Gervais	Paul McEniery, Michael Schuetz, Katie McMahon, et al.	Use of advanced MRI to diagnose brachial plexus injuries and inform surgical intervention (2020-18)	4
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Dr Zara Ioannides	Nanette Douglas	ATA188-MS-101: NeuroRx ATA 188-MS-101 Pender: An Open-Label Phase 1 Study to Evaluate the Safety of ATA188 in Subjects with Progressive and Relapsing-Remitting Multiple Sclerosis (2017-54)	6
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Dr Rob Henderson	Susan Heggie	ABC008 Myositis: A Substudy of CD8 Positron Emission Tomography Imaging with [89Zr]Zr-Df-crefmirlimab in Patients with Inclusion Body Myositis Administered ABC008 (2022_29)	18
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Prof Owen Ung	Dr Michael Wagels, Dr Danielle Herbert, Dr Aleks Edmundson	3D Breast Scaffold: Clinical trial evaluating medical-grade polycaprolactone-PCL breast scaffold implantation with autologous fat grafting for breast implant revision and congenital defect correction surgery (2021-38)	104
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Lead Investigator Name (RBWH staff in bold)	Other Study Investigators (RBWH staff in bold)	Research Project Title	Number of RBWH Patients Recruited in 2023
Dr Nicholas Weber	Renee Campbell	Beigene 304: An International, Phase 3, Open-label, Randomized Study of BGB-3111 Compared with Bendamustine plus Rituximab in Patients with Previously Untreated Chronic Lymphocytic Leukemia or Small Lymphocytic Lymphoma (2017-69)	4
Dr Sally Campbell		BeneGene2: Phase 3, open label, single arm study to evaluate efficacy and safety of FIX gene transfer with PF-06838435 (rAAV-Spark100-hFIX-Padua) in adult male participants with moderately severe to severe hemophilia B (FIX:C ≤2%) (2023-07)	3
Dr Ryan Sommerville	Wallace Dan Walker	BOSS: Optic nerve compression in base of skull tumours (2022_02)	12
Dr Rachael Wilks	A/Prof Scott Crowe, A/Prof Tanya Kairn, Dr Philip Chan, Dr Robyn Cheuk	Brachytherapy Pelvis: Design of a patient-matched vaginal applicator for brachytherapy treatments (2021-30)	2
Dr Rob Adam		Cassava: A Phase 3, Randomized, Double-Blind, Placebo-Controlled, Parallel-Group, 52-Week Study Evaluating The Safety And Efficacy Of Simufilam 100 Mg Tablets In Subjects With Mild-To-Moderate Alzheimer's Disease (2022-05)	15
Dr Michael Dickinson	Adrain Minson, John Seymour, Dr Caroline McNamara	COALITION: A multicentre, parallel arm, open-label trial of frontline R-CHOP/Pola-RCHP and glofitamab in younger, higher risk patients with diffuse large B cell lymphoma (DLBCL) (2022_09)	54
Dr Jason Butler	Cameron Curley; Elango Subramonia Pillai; Glen Kennedy; Kirk Morris; Nicholas Weber; Simon Durrant; Siok Tey, Robyn Western	Echo: A phase 3, randomised, double-blind, placebo-controlled, multicentre study of Bendamustine and Rituximab alone versus in combination with Acalabrutinib (ACP-196) in subjects with previously untreated mantle cell lymphoma. (2017-41)	2
Dr Stewart Hunt	Scott Crowe	ECP for CTCL: Investigating the use of VECTRA technology for extracorporeal photopheresis (ECP) in cutaneous T cell lymphoma (CTCL) patients (2022_34)	4
Dr Matthew Roberts	A/Prof John Yaxley, A/Prof Paul Thomas, A/Prof David Pattison	Staging of aggressive prostate cancer "invisible" to PSMA-PET: The FDG-PET for INvisible Disease (FIND) Trial (2020-32)	1
Dr Caroline McNamara		Geron: A Randomized Open-Label, Phase 3 Study to Evaluate Imetelstat (GRN163L) Versus Best Available Therapy (BAT) in Patients with Intermediate-2 or High-risk Myelofibrosis (MF) Refractory to Janus Kinase (JAK)-Inhibitor [GRN163LMYF3001] (2022-24)	7
Dr Don McLeod	Helen Legg	i-FIRST: A Prospective, Multi-Centre Trial of TKI Redifferentiation Therapy in Patients with RAIR Thyroid Cancer (2022_26)	2
Dr Anders Cervin	Kathryn Girling	LYR-210 Sinus MRI (LYRA): A Phase II, Randomized, Blinded, Sham Procedure-Controlled, Parallel-Group Trial to Evaluate the Efficacy, Safety and Tolerability of LYR-210 in Adult Subjects with Chronic Sinusitis (2018-035)	4
Dr Kowsi Murugappan	Jane Fox, Andrew Scott, Trixie Shinkel	MagSense: A Phase I Study Investigating the Safety and Efficacy of the MagSense™ Human Epidermal Growth Factor Receptor 2 (HER2) Test Reagent Using Magnetic Resonance Imaging and the MagSense™. Instrument in Subjects with HER2-positive Breast Cancer (2020-24)	4

Lead Investigator Name (RBWH staff in bold)	Other Study Investigators (RBWH staff in bold)	Research Project Title	Number of RBWH Patients Recruited in 2023
Dr Steven Lane	Gerlinda Amor, Robyn Western	MoST-Lly: A single arm, open label, signal seeking, phase II trial of the activity of Durvalumab in combination with Acalabrutinib in patients with high-grade B cell lymphoma (2019-19)	35
Professor David C. Reutens	Dr John Phamnguyen, Dr Kate Thompson, A/Prof Cecilie Lander, A/Prof Lata Vadlamudi, Dr Xiaohua Chen, Dr Alice-Ann Sullivan, Dr Stephen Walsh, Mrs Kimberley Irwin	NatLang: Localising language cortex using task-free fMRI using naturalistic stimuli. (2021-26)	1
Dr Anders Cervin	Kathryn Girling	Orchid: Multicentre, randomised, double-blind, parallel-group, placebo-controlled, Phase 3 efficacy and safety of Benralizumab in patients with eosinophilic chronic rhinosinusitis with nasal polyps. (2021-16)	10
Dr Ryan Sommerville	Charles Lin, Jennifer Sommerville, Paul Thomas, Brett Hughes, Gishan Ratnayake, Chris Oosthuizen, Catherine Barnett, Ashvini Abeysekara, Jason Papacostas, Touraj Taheri	Perineural Spread: Utility of High-Resolution MRI in Evaluating Perineural Spread in Head and Neck Cancers (2017-53)	4
Dr Rebecca Murray	Dr Georges Mehawed, Dr Matthew Roberts, Dr Nicholas Rukin	PRIMARY2: Is there a role for 3D anatomical models in tumour identification for urological cancer? (2021-27)	34
Dr Nick Weber	Madonna Fuery	RADAR_CCS: A randomised phase III trial with a PET response adapted design comparing ABVD +/- ISRT with A2VD +/- ISRT in patients with previously untreated stage IA/IIA Hodgkin lymphoma. (2022_17)	9
Dr Farzad Bashirzadeh	Nathan Ingerson	REDUCE: CSP-11121: Endobronchial Thermal Liquid Ablation (ETLA) for the Treatment of Emphysema – A First in Human Study (2022_10)	39
Dr Fatima Nasrallah	Craig Winter, Judith Bellapart, Esther Jacobson	PREDICT-TBI - PREDiction and Diagnosis using Imaging and Clinical biomarkers Trial in Traumatic Brain Injury: the value of Magnetic Resonance Imaging (j2020-15)	29
Dr Stephen Rose	David Pattison, David Wyld, Jeff Goh, Matthew Roberts, Paul Thomas	TherapB: AdvanCell Lead 212 therapy prostate trial (2022-07)	7
A/Prof. Arun Azad		UpFront PSMA: In men with metastatic prostate cancer, what is the safety and benefit of Lutetium-177 PSMA radionuclide treatment in addition to conventional hormone and chemotherapy (2019-20)	6
A/Prof Scott Crowe	Tanya Kairn	VECTRA for RT: Evaluation of 3D scanning systems for radiotherapy use (2022-33)	14
Prof Katie McMahon	Kate Stewart, Cathy Hargrave, Julie Burberry.	VECTRA Mahon MPhil (2023_31) / (2022_23)	20

Research Publications

Authors

Investigator	ORCID ID	Investigator	ORCID ID
Paul Thomas	https://orcid.org/0000-0002-2420-0950	Paul Colditz	https://orcid.org/0000-0002-6408-8238
Jennie Roberts	https://orcid.org/0000-0001-8296-6447	Kiarash Khosrotehrani	0000-0002-6406-4076
David Pattison	0000-0001-9718-5598	Gerard Byrne	0000-0001-8259-3812
Matthew J Roberts	0000-0003-0552-7402	John O'Sullivan	0000-0003-0422-8590
Melissa Latter	0000-0001-5382-9611	Rob Adam	0000-0003-0053-7919
Bjorn Burgher	0000-0002-0115-0268	Ashleigh Scott	0000-0001-5574-6713
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Lindy Jeffree	0000-0001-7663-2694	Rod Henderson	0000-0002-2820-8183
Judith Bellapart	0000-0001-7135-6723		

Publications in 2023

Journal Articles (RBWH staff in bold)

Burgher B, Scott J, Cocchi L, Breakspear M. Longitudinal changes in neural gain and its relationship to cognitive control trajectory in young adults with early psychosis. *Transl Psychiatry*. 2023 Mar 3;13(1):77. doi: 10.1038/s41398-023-02381-x. PMID: 36864034; PMCID: PMC9981770

Chang J, Shaw TB, Holdom CJ, **McCombe PA, Henderson RD**, Fripp J, Barth M, Guo CC, Ngo ST, Steyn FJ; Alzheimer's Disease Neuroimaging Initiative. Lower hypothalamic volume with lower body mass index is associated with shorter survival in patients with amyotrophic lateral sclerosis. *Eur J Neurol*. 2023 Jan;30(1):57-68. doi: 10.1111/ene.15589. Epub 2022 Nov 8. PMID: 36214080; PMCID: PMC10099625

de Zubicaray G, Brownsett SLE, Copland D, Drummond K, **Jeffree RL**, Olson S, Murton E, Ong B, Robinson G, Tolacheva V, McMahon KL. (2023) Chronic aphasia after left-hemisphere resective surgery. *Brain and Language*. 239; 105244. doi: 10.1016/j.bandl.2023.105244

Kearney E, Brownsett SLE, Copland DA, Drummond KJ, **Jeffree RL**, Olson S, Murton E, Ong B, Robinson GA, Tolacheva V, McMahon KL, de Zubicaray GI. (2023) Relationships between reading performance and regional spontaneous brain activity following surgical removal of primary left-hemisphere tumors: A resting-state fMRI study. *Neuropsychologia*. 188: 108631. doi: 10.1016/j.neuropsychologia.2023.108631

Koussis NC, **Burgher B**, Jeganathan J, **Scott JG**, Cocchi L, Breakspear M. Cognitive Control System Gates Insula Processing of Affective Stimuli in Early Psychosis. *Schizophr Bull*. 2023 Mar 2:sbad010. doi: 10.1093/schbul/sbad010. Epub ahead of print. PMID: 36866458

Nasrallah F, **Bellapart J**, Walsham J, et al. (2023) PREDiction and Diagnosis using Imaging and Clinical biomarkers Trial in Traumatic Brain Injury (PREDICT-TBI) study protocol: an observational, prospective, multicentre cohort study for the prediction of outcome in moderate-to-severe TBI. *BMJ Open* 2023;13:e067740. doi:10.1136/bmjopen-2022-067740

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Pagnozzi AM, van Eijk L, Pannek K, Boyd RN, Saha S, George J, Bora S, Bradford D, Fahey M, Ditchfield M, Malhotra A, Liley H, **Colditz PB**, Rose S, Fripp J. Early brain morphometrics from neonatal MRI predict motor and cognitive outcomes at 2-years corrected age in very preterm infants. *Neuroimage*. 2023 Feb 15;267:119815. doi: 10.1016/j.neuroimage.2022.119815. Epub 2022 Dec 15. PMID: 36529204

Roberts MJ, Maurer T, Perera M, Eiber M, Hope TA, Ost P, Siva S, Hofman MS, Murphy DG, Emmett L, Fendler WP. Using PSMA imaging for prognostication in localized and advanced prostate cancer. *Nat Rev Urol*. 2023 Jan;20(1):23-47. doi: 10.1038/s41585-022-00670-6. Epub 2022 Dec 6. PMID: 36473945

Tariq A, McGeorge S, Pearce A, Rhee H, Wood S, Kyle S, Marsh P, Raveenthiran S, Wong D, McBean R, Westera J, Dunglison N, Esler R, Navaratnam A, Yaxley J, **Thomas P, Pattison DA, Roberts MJ**. Characterization of tumor thrombus in renal cell carcinoma with prostate specific membrane antigen (PSMA) positron emission tomography (PET)/computed tomography (CT). *Urol Oncol*. 2022 Jun;40(6):276.e1-276.e9. doi: 10.1016/j.urolonc.2022.03.007. Epub 2022 Apr 22. PMID: 35466037

Yang J, Pourzinal D, **Byrne GJ**, McMahon KL, Copland DA, **O'Sullivan JD**, Mitchell L, Dissanayaka NN. (2023) Global assessment, cognitive profile and characteristics of mild cognitive impairment in Parkinson's disease. *Intl Journal of Geriatric Psychiatry*, 2023;e5955. doi: 10.1002/gps.5955

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Pourzinal D, Bakker A, **Byrne G**, McMahon KL, **O'Sullivan J**, **Adam R**, Lehn A, Copland D, Yang JH, Littleford R, Chatfield M, Pontone G, Mari Z, Dissanayaka N. (2023) Levetiracetam for the treatment of mild cognitive impairment in Parkinson's disease: a double-blind controlled proof-of-concept trial protocol. Pilot and Feasibility Studies, 9, 189 (2023). DOI: 10.1186/s40814-023-01406-y

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Saad J, Shanmugasundaram R, Wong V, Le K, Arianayagam M, **Roberts MJ**. 68Ga-PSMA PET/CT false positive liver metastasis prior to radical prostatectomy. ANZ J Surg. 2023 Apr;93(4):1029-1030. doi: 10.1111/ans.18051.

Doan P, Counter W, Papa N, Sheehan-Dare G, Ho B, Lee J, Liu V, Thompson JE, Agrawal S, **Roberts MJ**, Buteau J, Hofman MS, Moon D, Lawrentschuk N, Murphy D, Stricker PD, Emmett L. Synchronous vs independent reading of prostate-specific membrane antigen positron emission tomography (PSMA-PET) and magnetic resonance imaging (MRI) to improve diagnosis of prostate cancer. BJU Int. 2023 May;131(5):588-595. doi: 10.1111/bju.15929

Gondoputro W, Doan P, Katelaris A, Scheltema MJ, Geboers B, Agrawal S, Liu Z, Yaxley J, Savdie R, Rasiah K, Frydenberg M, **Roberts MJ**, Malouf D, Wong D, Shnier R, Delprado W, Emmett L, Stricker PD, Thompson J. 68Ga-PSMA-PET/CT in addition to mpMRI in men undergoing biopsy during active surveillance for low- to intermediate-risk prostate cancer: study protocol for a prospective cross-sectional study. Transl Androl Urol. 2023 Oct 31;12(10):1598-1606. doi: 10.21037/tau-22-708

Buteau JP, Moon D, Fahey MT, **Roberts MJ**, Thompson J, Murphy DG, Papa N, Mitchell C, De Abreu Lourenco R, Dhillon HM, Kasivisvanathan V, Francis RJ, Stricker P, Agrawal S, O'Brien J, McVey A, Sharma G, Levy S, Ayati N, Nguyen A, Lee SF, **Pattison DA**, Sivaratham D, Frydenberg M, Du Y, Titus J, Lee ST, Ischia J, Jack G, Hofman MS, Emmett L. Clinical Trial Protocol for PRIMARY2: A Multicentre, Phase 3, Randomised Controlled Trial Investigating the Additive Diagnostic Value of [68Ga]Ga-PSMA-11 Positron Emission Tomography/Computed Tomography in Men with Negative or Equivocal Multiparametric Magnetic Resonance Imaging for the Diagnosis of Clinically Significant Prostate Cancer. Eur Urol Oncol. 2023 Dec 6:S2588-9311(23)00253-5. doi: 10.1016/j.euo.2023.11.008

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Hofman MS, Emmett L, Sandhu S, Irvani A, Buteau JP, Joshua AM, **Goh JC**, **Pattison DA**, Tan TH, Kirkwood ID, Ng S, Francis RJ, Gedye C, Rutherford NK, Weickhardt A, Scott AM, Lee ST, Kwan EM, Azad AA, Ramdave S, Redfern AD, Macdonald W, Guminski A, Hsiao E, Chua W, Lin P, Zhang AY, Stockler MR, Williams SG, Martin AJ, Davis ID; TheraP Trial Investigators and the Australian and New Zealand Urogenital and Prostate Cancer Trials Group. Overall survival with [177Lu]Lu-PSMA-617 versus cabazitaxel in metastatic castration-resistant prostate cancer (TheraP): secondary outcomes of a randomised, open-label, phase 2 trial. Lancet Oncol. 2024 Jan;25(1):99-107. doi: 10.1016/S1470-2045(23)00529-6

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Jamieson Trauma institute (JTI)



Professor Michael Schuetz
Director
Jamieson Trauma Institute



JTI Team


The Jamieson Trauma Institute (JTI) has had another successful year and achieved significant milestones as detailed in this report. Notably, we signed new 5-year agreements with our partners Metro North Health, the Motor Accident Insurance Commission and Queensland University of Technology, whose continued investment reflects JTI's strong performance and alignment with their partners strategic goals. JTI plays a role in advancing system capability, quality improvement, knowledge translation, financial sustainability, data and epidemiology, and research programs in trauma systems. JTI is thus making contributions to the physical and mental health of Queenslanders through research areas such as data analytics, use of advanced imaging, innovative rehabilitation, epidemiology, injury prevention, and biomedical engineering.

As we reach maturity, JTI's research activities, including those of the Queensland Injury Surveillance Unit, have expanded with major new initiatives in mental health after trauma and rehabilitation engineering. We currently have over 80 staff, students and affiliated members. The institute's activities are arranged in eight Themes (Data Quality and Analytics, Injury Prevention, Clinical Trials, Diagnostics and Innovations, Education and Training, Augmented Reality and Virtual Reality in Trauma Care, Rehabilitation and Outcome Measurement, and Quality of Care and Processes). In 2023, JTI published 73 papers in high-quality research journals and delivered 72 presentations, and several researchers received prizes and awards during the year. JTI co-hosted several events including the "Surgery, Orthopaedic Trauma and Burns Infection Management Workshop", the "Annual Kenneth Jamieson Lecture", and the "Royal Australian College of Surgeons Trauma Symposium: E-mobility – Current Perspectives and Future Directions".

JTI researchers were key players in the launch of a successful new module on acute compartment syndrome as part of the Queensland Trauma Education program, which provides multidisciplinary trauma care education and resources (<https://csds.qld.edu.au/qte/>). Our staff held leadership roles at international conferences such as Rehab Week 2023 (Singapore) and Trauma 2023 (Melbourne). Findings on e-Mobility injury trends and patterns continue to shape policy and public opinion with over 20 media appearances, several data requests to Queensland and interstate government agencies, and the drafting of the "Emobility Position Paper" of the Royal Australasian College of Surgeons and the Australasian Injury Prevention Network. Participation in state, national and international committees related to trauma and injury has expanded this year, and JTI representatives are involved in shaping the future of trauma systems.

In summary, JTI has achieved remarkable milestones this year, thanks to our dedicated team. Our strategic partnerships and commitment to research continue to drive progress in trauma systems, benefiting the physical and mental health of Queenslanders. JTI remains at the forefront of innovation, fostering collaboration and contributing to cutting-edge advancements in trauma care. Exciting possibilities await as we explore new avenues in augmented reality and remote care for injured Queenslanders who live in regional and rural areas of our state.

Successful PhD candidates in 2023

Name	PhD Title	Month Completed	Affiliated University	Summary
Dr. Andrew Foster	Improving the management of fracture-related infection through local antibiotic therapy	September 2023	Queensland University of Technology	The development of fracture-related infection (FRI) is a devastating complication in orthopaedic trauma surgery. Treatment requires multidisciplinary input often involving further surgical procedures and prolonged antibiotic therapy. Original research within this thesis includes the first population-based epidemiological and health economic analysis of FRI performed worldwide. These findings demonstrate enormous upside potential to improving current prevention and treatment methods. One potential method of doing so is through improving the delivery of local antibiotic therapy. A novel antibiotic-loaded hydrogel is investigated within a series of large animal models, which demonstrated superiority in prevention and treatment of FRI over currently available clinical treatments.
				
Dr. David Sparks	Convergence of scaffold-guided bone regeneration principles and reconstructive surgery: A regenerative matching axial vascularisation approach to the load-bearing long bone defect	April 2023	Queensland University of Technology	Functional reconstruction of large volume bone loss in the limbs is demanding. Reconstructive approaches available have variable success and novel approaches, such as those incorporating tissue engineering methods, are required. The thesis describes and evaluates the rare bench-to-bedside translation of a novel tissue engineering technique, termed Regenerative Matching Axial Vascularisation (RMAV), to reconstruct major bone loss in the load-bearing limb where contemporary surgical options are limited. The work described takes the marriage between scaffold-guided tissue regeneration and modern surgical practice to new heights.

Research Awards and Achievements

Recipient (RBWH staff in bold)	Award	Event
Nathan Peters, Frances Williamson, Claire Richard	2023 Gilbert Brown Prize for the best contribution to the Gilbert Brown Prize Session	Australian and New Zealand College of Anaesthetists Annual Scientific Meeting
Andrew Foster	Don Tuffley Award for Best Clinical Conference Paper 2023	Australian Orthopaedics Association Queensland Annual Scientific Meeting 2023
Buddhi Herath	QUT Centre for Biomedical Technologies Mechanical, Medical and Process Engineering Higher Degree Research Excellence Award	QUT Centre for Biomedical Technologies Mechanical, Medical and Process Engineering
Rex Parsons, Robin Blythe, Adrian Barnett, Susanna Cramb , Steven McPhail	Venables award 2023 runners-up	Statistical Computing and Visualisation section of the Statistical Society of Australia

Research Grants

Investigator Names (RBWH staff in bold)	RBWH Departments / Research Groups	Research Project Title	Granting Body	Total Awarded (whole all years)	Length of Awards in years and years active
Fatima Nasrallah, David Reutens, Shekhar Chandra, James Walsham, Trevor Russell, Sandeep Bhuta, Jason Ross, Craig Winter , Siva Senthuran, Judith Bellapart , Cliff Pollard , Jacelle Warren , Victoria McCreanor	Intensive Care, Neurosurgery, Jamieson Trauma Institute	PREDICT-TBI - PREDiction and Diagnosis using Imaging and Clinical biomarkers Trial in Traumatic Brain Injury: the value of Magnetic Resonance Imaging	Medical Research Future Fund Traumatic Brain Injury Mission 2020	\$1,765,000	3 years, 2020-2023
Fatima Nasrallah, Cliff Pollard , Craig Winter , Dylan Flaws , Esther Jacobson , Gary Mitchell , Jacelle Warren , Judith Bellapart , Katie McMahon, Maria Hennessy, Mark Midwinter, Michael O'Sullivan , Michael Reade , Michael Redmond , Michael Schuetz , Nathan Brown , Patrick Donnelly, Paul Thomas, Rachael Brown , Silvia Manzanero , Trevor Russell, Victoria McCreanor	Jamieson Trauma Institute, Neurosurgery, Mental Health, Emergency and Trauma Centre, Intensive Care, Neurology	PREDICT-TBI - PREDiction and Diagnosis using Imaging and Clinical biomarkers Trial in Traumatic Brain Injury: the value of Magnetic Resonance Imaging	Motor Accident Insurance Commission	\$1,490,687	3 years, 2021-2024
Chiara Santomauro, Mia McLanders, Cliff Pollard , Drew Rae, Penelope Sanderson	Clinical Skills Development Service, Jamieson Trauma Institute	Improving emergency trauma care for rural, regional and remote Queenslanders	Advance Qld Industry Research Fellowship	\$180,000	3 years, 2020-2023
Moe Thandar Wynn, Arthur ter Hofstede, Robert Andrews, Kirsten Vallmuur , Emma Bosley, Stephen Rashford, Clinton Gibbs, Michael Schuetz , Martin Wullschleger	Jamieson Trauma Institute	Road Trauma: Modelling the Patient Journey from Pre-hospital Triage to Outcome Using Process Mining	Motor Accident Insurance Commission	\$325,790	3 years, 2020-2023
Mark Daniel, Gavin Turrell, S Suzanne Carroll, Margaret Cargo, K Shuvo Bakar, Luis Salvador-Carulla, A Taylor, Yogi Vidyattama, Nasser Bagheri, Susanna Cramb	Jamieson Trauma Institute	Novel modelling to improve decision-making for neighbourhood design to reduce chronic disease risk	NHMRC Ideas grant	\$901,564	4 years, 2021-2025
Melinda Fitzgerald, Belinda Gabbe, Natasha Lannin, Kirsten Vallmuur , Kate Curtis, James Harrison, Jesse Young, David Menon, ..., Gary Mitchell , Anthony Delaney, Michael Reade , ..., Fatima Nasrallah, Sandy Shultz, Sarah Hellewell	Jamieson Trauma Institute, Emergency and Trauma Centre	An informatics approach to predict outcomes and monitor intervention efficacy following moderate to severe traumatic brain injury	MRFF 2020 Traumatic Brain Injury Mission - Stream 1	\$499,816	2 years, 2021-2023
Marie-Luise Wille, Dietmar Hutmacher, Sinduja Suresh, Mohit Chhaya, Navid Khani, Markus Laubach, Boris Holzapfel, Michael Wagels, Paige Little, Beat Schmutz , Michael Schuetz	Jamieson Trauma Institute	An Innovative 3D Printed Patient-Specific Bone Scaffold Design for the Treatment of Large Volume Bone Defects	Clive & Vera Ramaciotti Foundation & QUT	Clive & Vera Ramaciotti Foundation \$100,000 & QUT \$30,000	3 years, 2021-2024

Investigator Names (RBWH staff in bold)	RBWH Departments / Research Groups	Research Project Title	Granting Body	Total Awarded (whole all years)	Length of Awards in years and years active
Susanna Cramb	Jamieson Trauma Institute	PLACE (Prioritising Location-based Analysis and Consumer Engagement) for Change	NHMRC Emerging Leadership 1 Investigator Award	\$575,740	4 years, 2022-2026
Frances Williamson, Zephania Tyack, Victoria McCreanor, Martin Wullschleger, Jacelle Warren, Michael Handy, Steven McPhail	Trauma Service, Jamieson Trauma Institute	Value-based trauma care: understanding the cost, effect and implementation of an innovative specialist- led multidisciplinary trauma admitting service	Metro North Health Collaborative Research Grants	\$49,913.54	2 years, 2021-2023
Clinton Gibbs, Jacelle Warren, Kirsten Vallmuur, Susanna Cramb, Adam Rolley, Alan Woodley, Gary Mitchell, Angela Watson, Rex Parsons, Christopher Hayden	Emergency and Trauma Centre, Jamieson Trauma Institute	Applications of a novel neurosurgical service accessibility index to improve emergency care of people sustaining a road trauma-related traumatic brain injury in Queensland	Emergency Medicine Foundation (EMF) Special Research Program 'Trauma Care in Regional, Rural and Remote Queensland'	\$37,667	1 year, 2022-2023
Shaun O'Leary, Nadine Foster, Gary Mitchell, Tanya Smyth, Jacelle Warren, Tracy Comans, Gustavo Machado, Panos Barlas, Michelle Cottrell, Janelle Heine, William See	Physiotherapy, Emergency and Trauma Centre, Jamieson Trauma Institute,	Reducing Inappropriate Medications for low back pain in the Emergency department (RIME): a controlled interrupted time- series implementation study	HCF Research Foundation Translational Research Grants	\$289,316	3 years, 2022-2025
Benjamin Powell, Anthony Lynham, Mark Midwinter, Susanna Cramb	Jamieson Trauma Institute	Predicting in-flight hypotension in aeromedical trauma patients	Emergency Medicine Foundation Emerge Grants	\$10,325	1 year, 2022-2023
Susanna Cramb, Darren Wraith, Louise Baldwin, Helen Vidgen	Jamieson Trauma Institute	Enabling data-driven decisions for healthier neighbourhoods: Developing scalable methods to capture healthy food access in South-East Queensland	QUT Centre for Data Science Second Byte funding	\$10,000	1 year, 2022-2023
Beat Schmutz, Michael Schuetz, Uwe Dulleck, Stephen Whyte, William Steadman	Jamieson Trauma Institute, Orthopaedics	Digital-powered healthcare: Improving communication, engagement and treatment compliance in patients with implant-related infections	QUT Centre for Biomedical Technologies Industry Engagement Grant	\$30,000	1 year, 2022-2023
Luise Cullen, William Parsonage, Laura Stephensen, Ray Mahoney, Jaimi Greenslade, Zephania Tyack, Susanna Cramb, Victoria McCreanor, Derek Chew, Andrea McKivett, Abdul Rahman Ihdahid, Gemma Figtree, Graham Hillis, Gregory Starmer, Andrew Goodman	Emergency and Trauma Centre, Jamieson Trauma Institute	Clinical and health economics implications of routine CTCA for emergency department assessment of Aboriginal and Torres Strait Islander people at risk of acute coronary syndrome	Medical Research Future Fund Cardiovascular Health Mission	\$1,488,687.70	2 years, 2023-2025

Investigator Names (RBWH staff in bold)	RBWH Departments / Research Groups	Research Project Title	Granting Body	Total Awarded (whole all years)	Length of Awards in years and years active
Kirsten Vallmuur , Thom Saunders, Susanna Cramb , Adam Rolley, Jacelle Warren , Benjamin Kleverlaan, Clinton Gibbs, Clair Sullivan, Robert Andrews, Moe Thandar Wynn, Arthur ter Hofstede, Cate Cameron , Clifford Afoakwah , Shahera Banu , Alejandro Melendez-Calderon , Jacky Hung, Lachlan Mortimer	Jamieson Trauma Institute	Navigating INJured patient Journeys through Emergency care to Recovery (NINJER) – Consumer engagement	Health Translation Queensland Consumer and Community Involvement microgrants	\$1,050	1 years, 2023
Jacelle Warren	Jamieson Trauma Institute	Long term burden and cost to the health care system for treatment of injury following transport crashes	RBWH Foundation Postgraduate Scholarship renewal	\$39,633	1 year, 2023-2024
Camila Shirota, Catherine Cave, Jacqui Mitchell, Alejandro Melendez-Calderon , Waydy Mitchell, Ryan Bell	Jamieson Trauma Institute	EPIC-Tech: Engineering and Physiotherapy Interdisciplinary Collaboration with Technology - exploration of a transdisciplinary approach to allied health services at the PAH	Hopkins Centre Seed Funding 2023	\$39,985	1 year, 2023-2024
Other funding					
Kate Hunter, Kirsten Vallmuur , Catherine Niven, Kathleen Clapham, Ben Beck, Debbie Scott, Jane Elkington	Jamieson Trauma Institute	National Injury Prevention Strategy Update - Product Safety Additions	Department of Health and Aged Care	\$104,170	1 Year, 2023

Current RBWH Department / Research Group Led Research Activity

Lead Investigator Name (RBWH staff in bold)	Other Study Investigators (RBWH staff in bold)	Research Project Title	Number of RBWH Patients Recruited in 2023
Kirsten Vallmuur	Matthew Hope, Ben Beck, Victoria McCreanor, Gary Mitchell , Rob Eley, Shefta Huda, Tanya Smyth , Brett Droder , Cate Cameron , Jacelle Warren	Personal mobility device injuries: observational study using data from Brisbane	Data from 1,500 admissions to RBWH, PAH and Mater
Cate Cameron	Jacobus Ungerer, Kirsten Vallmuur , Jacelle Warren , Victoria McCreanor, Cliff Pollard , Michael Schuetz , Tegwen Howell, Gary Mitchell	PACE – Alcohol and injury: Prevalence study at RBWH ED	Data from 1160 patients presenting to the Emergency and Trauma Service
Cate Cameron	Bill Loveday, Kirsten Vallmuur , Victoria McCreanor, Melanie Proper, Jacelle Warren , Cliff Pollard , Nick Graves	CODI – Prevalence and patterns of opioid use pre- and post-trauma in Queensland: population-based data linkage study	Data from over 600,000 admissions Qld-wide
Kirsten Vallmuur	Angela Watson, Paul Taylor, Michael Clacher, Sebastian Bielen, Andrew Currie, Cate Cameron , Jacelle Warren , Victoria McCreanor	CLAIMS – Feasibility, requirements, and value of data linkage of motor vehicle accident compensation, workers compensation and health data in Queensland	Data from over 1 million records Qld-wide

Lead Investigator Name (RBWH staff in bold)	Other Study Investigators (RBWH staff in bold)	Research Project Title	Number of RBWH Patients Recruited in 2023
Panos Barlas	Michael Schuetz, Christopher Smith, Jerry van de Pol, Richard Hanly, Esther Jacobson, Alejandro Melendez-Calderon	SMART-Ankle: Streamlining Management And Rehabilitation with Technology for Ankle fractures	0
Kirsten Vallmuur	Jacelle Warren, Jesani Catchpoole , Donna Truran, Ming Zhang, Michael Lawley, Genevieve Westacott	ITAAR – SNOMED-ICD interoperability and mapping project: Injury Terminology Aware Analytics and Reporting	Methodological study – does not involve patient recruitment
Beat Schmutz	Marie-Luise Wille, Paige Little, Buddhi Herath, Dietmar Hutmacher	Best work practise for the manufacturing of patient specific 3D printed scaffolds (for critical size bone defects) – Improved workflow with opensource software.	Use of data from existing databases – does not involve patient recruitment
Beat Schmutz	Tri Phan, Kevin Tetsworth	Variation in femoral morphology and its effects on implant design and implant fit in Asian populations	Use of data from existing databases – does not involve patient recruitment
Beat Schmutz	Hiro Minehara, Chun Yuen, Yohan Schmutz-Leong, Aaron Kurtti, Michael Schuetz	Location of tibial nail entry point relative to patellar tendon with patellar centring knee alignment	Use of data from existing databases – does not involve patient recruitment
Beat Schmutz	Husain Tabassum, Paige Little, Andrew Fielding, Andreas Petersik, Heiko Gottschling, Manuel Schroeder	Virtual Automated Anatomical 3D Alignment of Bone Fragments – Solving the Fracture Puzzle	Use of data from existing databases – does not involve patient recruitment
Beat Schmutz	Andreas Kouzelis, Frances Williamson, Gary Mitchell, Michael Schuetz, Silvia Manzanero	Patient-specific pelvic and acetabular fracture classification using Artificial Intelligence	127
Beat Schmutz	Marco Zucchet, Cristiano Pizzamiglio	Femur Morphometric Analysis	Use of data from existing databases – does not involve patient recruitment
Frances Williamson	Victoria McCreanor, Zephania Tyack, Martin Wullschleger, Jacelle Warren, Michael Handy , Steven McPhail	Value-based trauma care: understanding the cost, effect and implementation of an innovative specialist-led multidisciplinary trauma admitting service	Data from 7,883 Trauma Service patients
Beat Schmutz	Ashish Wadhawan, Michael Schuetz, Kevin Tetsworth , Jason Dowling, Pierrick Bourgeat, Jurgen Fripp, Frances Williamson, Gary Mitchell	Development of an Artificial Intelligence screening system to identify patients requiring a CT scan following distal radius fractures	525 x-rays
Kirsten Vallmuur	Susanna Cramb , Victoria McCreanor, Thom Saunders	Queensland Injury Atlas: beta release	Development study – does not involve patient recruitment
Jacelle Warren	Clinton Gibbs, Kirsten Vallmuur, Susanna Cramb , Adam Rolley, Alan Woodley, Gary Mitchell , Angela Watson, Rex Parsons, Christopher Hayden	iTRAQI – Applications of a novel neurosurgical service accessibility index to improve emergency care of people sustaining a road trauma-related TBI in Qld	Development study – does not involve patient recruitment
Genevieve Westacott	Panos Barlas, Beat Schmutz, Michael Schuetz , Marlien Varnfield, Christian Redd, David Silvera	Intelligent Connected Medical Devices	Methodological study – does not involve patient recruitment
Beat Schmutz	Padden Jones, Hiro Minehara	Effect of age, ethnicity, and sex on the anatomical fitting of the LCP Distal Femur plate	Use of data from existing databases – does not involve patient recruitment

Lead Investigator Name (RBWH staff in bold)	Other Study Investigators (RBWH staff in bold)	Research Project Title	Number of RBWH Patients Recruited in 2023
William Steadman	Michael Schuetz, Beat Schmutz, Andrej Trampuz, Kevin Tetsworth	Surgical treatment of prosthetic joint infection and local therapy	0
William Steadman	Paul Chapman, Michael Schuetz, Beat Schmutz, Kevin Tetsworth, Bonnie Woods, Uwe Dulleck, Jason Brown, Shannon Dias, Brett Droder, Arpita Das, Phillip Andrews	Design and development of a gamified app to improve patient engagement and compliance with treatment plan	0
Alejandro Melendez-Calderon	Sandy Brauer, Paul Hodges, Trevor Russell, Sivakumar Balasubramanian, Chelsea Dobbins, Robyn Lamont, Kate Regnault, Jonathan Hadwen	Open-source eHealth platform for generalised data collection	Development study – does not involve patient recruitment
Jeffrey Lipman	Timothy Hardcastle, Elizabeth Studley , Martin Wullschleger, Carl Lisec, Silvia Manzanero, Olivia Zheng , Jonathan Ko, Victor Kong, Damian Clark	Comparison of trauma systems between Queensland and KwaZulu-Natal province (South Africa)	Data from 2305 patients extracted from the RBWH Trauma Service Database
Alejandro Melendez-Calderon	Camila Shirota, Denny Giguere, Justin Fong, Hang Chung Ling	Enhancing neurorehabilitation and functional recovery after brain and spinal cord injury with robots, AI and co-design	Development study – does not involve patient recruitment
Alejandro Melendez-Calderon	Camila Shirota, Denny Giguere, Justin Fong, Hang Chung Ling	AI-EXO: Personalised wearable robotics for restoration of walking function after brain injury	Development study – does not involve patient recruitment
Michael Schuetz	Peter Choong, Fiona Wood, Andrej Trampuz, Kevin Tetsworth, Jason Roberts, Stephen McPhail, Andrew Foster, Sina Babazadeh, Michelle Dowsey, Yangqi Xu, Emma Choong, Paul Chapman, William Steadman, Brianna Rainnie, Danika Jurat, B Sandeep, Silvia Manzanero	Scoping reviews on outcomes from infection in orthopaedic surgery, trauma and burns	Literature reviews – do not involve patient recruitment
Anthony Lynham	India Plath, Beat Schmutz	Endoscopic condylar mandible approach and outcomes at the Royal Brisbane and Women's Hospital	1
Quality assurance activities			
Michael Schuetz	Bonnie Woods, Paul Chapman, Kevin Tetsworth, Andrew Foster, Jacelle Warren	mDRIFT – multidisciplinary Device-Related InFection Team. Identifying Risk Factors for Fracture-Related Infection	Data from 59 new referrals to mDRIFT
Michael Schuetz	Shahera Banu, Kirsten Vallmuur, Genevieve Westacott, Frances Williamson	Injury-related compartment syndrome data analysis and education	Data from 2,859 injury admissions Qld-wide

Collaborative Research Activity Involving RBWH Department / Research Group

Lead Investigator Name (RBWH staff in bold)	Other Study Investigators (RBWH staff in bold)	Research Project Title	Number of RBWH Patients Recruited in 2023
Adam Mahoney	Michael Reade, Kirsten Vallmuur, Cate Cameron, Kerrie Mengerson	The spatial epidemiology of trauma in Queensland	Queensland-wide data
Anthony Holley	Brett Droder, Jeremy Cohen, Jeffrey Lipman, Michael Reade, Kirsten Vallmuur	The development of an Australasian burns critical care registry	0

Lead Investigator Name (RBWH staff in bold)	Other Study Investigators (RBWH staff in bold)	Research Project Title	Number of RBWH Patients Recruited in 2023
Andrew Foster	Kevin Tetsworth, Michael Schuetz , Ross Crawford, Anjali T Jaiprakash, Shahera Banu, David Paterson	Antibiotic-loaded polymethyl methacrylate bone cement intramedullary nails in the treatment of fracture-related infection	0
Zemedu A Ferede	Michael Schuetz, Justin Kenardy, Beat Schmutz , Dylan Flaws	Predicting and improving longer term outcomes of Post-Intensive Care Syndrome	0
Christopher Futter	Alvin Obed , Paul Schlosser, Penelope Sanderson, Christine Woods, Kerstin Wyssusek – Project funded by JTI	The use of Head-Mounted Displays (HMDs) to detect patient deterioration in a simulated trauma setting	23 participants – healthcare workers
Rebecca Mitchell	Cate Cameron , Reidar Lystad, Olav Nielssen, Anne McMaugh, Geoff Herkes, Carolyn Schniering, Tien-Ming Hng	Impact of chronic health conditions and injury on school performance and health outcomes in New South Wales, Australia	Data from over 22,000 injury hospitalisations
Christopher Futter	George Pang, Mark Trembath, Kerstin Wyssusek, Christine Woods – Project funded by JTI	3D Printed Thoracic Epidural Trainer and a novel approach to ultrasound guided epidural insertion	Participants are clinicians
Fatima Nasrallah	David Reutens, Shekhar Chandra, James Walsham, Trevor Russell, Sandeep Bhuta, Jason Ross, Craig Winter , Siva Senthuran, Judith Bellapart, Cliff Pollard, Jacelle Warren, Victoria McCreanor	PREDICT-TBI: PREdiction and Diagnosis using Imaging and Clinical biomarkers Trial in Traumatic Brain Injury	14
Luke Visscher	Anjali Prakash, Ross Crawford, Michael Schuetz, Beat Schmutz	Can statistical shape modelling of population variation in bony anatomy be used to improve orthopaedic surgery outcomes in terms of implant design and surgical planning compared to the standard	Use of data from existing databases – does not involve patient recruitment
Terra Bredy	Celeste Glasgow, Jennifer Strong, Sue Laracy , Freyr Patterson, Jennifer Fleming – Project funded by JTI	Enhancing occupational performance in orthopaedic trauma patients with distal radial fractures	0
Simon Platt	Beat Schmutz , James Wheeler, Philipp Loesl, Yohan Schmutz-Leong, Benjamin Huang	A volumetric analysis of the posterior malleolus segment in supination external rotation type 4 ankle fractures	Use of data from existing databases – does not involve patient recruitment
Martha Druery	Cate Cameron, Jacelle Warren , Michael Waller, Danielle Ford, Arpita Das , Xylyss Lyon, Julia Wood	Factors affecting psychosocial and physical outcomes after major burn injuries in adults	Data from 274 patients from the Professor Stuart Pegg Adult Burns Centre
Stephen Butler	Trevor Gervais, Michael Schuetz , Katie McMahon, Michael O’Sullivan, Robert Henderson , Nyoman Kurniawan, Jin Jin, James Powell, Esther Jacobson	Use of advanced magnetic resonance imaging to diagnose brachial plexus injuries and inform surgical intervention	2
Chiara Santomauro	Mia McLanders, Cliff Pollard, Sarah Pearce , Drew Rae, Penelope Sanderson	Improving emergency trauma care for rural, regional and remote Queenslanders	Participants are medical students
Shaun O’Leary	Nadine Foster, Gary Mitchell, Tanya Smyth, Jacelle Warren , Tracy Comans, Gustavo Machado, Panos Barlas, Michelle Cottrell, Janelle Heine , William See	Reducing Inappropriate Medications for low back pain in the Emergency department (RIME): a controlled interrupted time-series implementation study	510

Lead Investigator Name (RBWH staff in bold)	Other Study Investigators (RBWH staff in bold)	Research Project Title	Number of RBWH Patients Recruited in 2023
Mark Elcock	Clinton Gibbs, Kirsten Vallmuur , Jacelle Warren , Shahera Banu , Jahnvi Burnham	Developing and implementing a framework for evaluating the impact of the COVID-19 pandemic on Qld's aeromedical retrieval service network operation, performance, and outcomes to inform future preparedness	Retrieval Services Queensland data
Samantha Borg	Cate Cameron , Victoria McCreanor, Steven McPhail	Prevalence, health service encounters and economic burdens associated with opioid use in adult spinal cord injury populations	Queensland-wide data
Dylan Flaws	Vivienne Tippett, Sue Patterson, Michael Handy – Project funded by JTI	UR-TOPIC – Understanding Recovery and Tracking Outcomes of Post Intensive Care	6
Belinda Dow	Debbie Long, Alexandra De Young, Justin Kenardy	Feasibility of an early intervention to prevent persistent traumatic stress reactions in young children admitted to intensive care	Recruitment at Queensland Children's Hospital
Benjamin Powell	Anthony Lynham , Mark Midwinter, Susanna Cramb	Predicting in-flight hypotension in aeromedical trauma patients	Recruitment at LifeFlight
Elizabeth Studley	Kirsten Vallmuur , Michael Schuetz , Belinda Gabbe, Adam Mahoney	Trauma outcomes comparison between different trauma systems in Australia. Comparison of trauma systems between states of Queensland, Tasmania, and Victoria	State-wide data
Binuri Perera	Susanna Cramb , Kirsten Vallmuur , Kevin Laupland	Geographic variations in sepsis across Queensland	Queensland-wide data
Lucas Wheatley	Michael Rudd , Perry Cleland , Jacelle Warren	Cutaneous and radiological seatbelt signs indicating hollow viscus injury	Data from 111 patients extracted from the RBWH Trauma Service Database
Kavya Venkatesh	Alison Cutler , Martin Wullschleger, Aparna Arjunan, Joseph Tan, Shalisa Maisrikrod , Jacelle Warren	Evaluation of the characteristics and outcomes of geriatric trauma patients admitted to the ICU	Data from 8,225 admitted patients
Camila Shirota	Catherine Cave, J Mitchell, Alejandro Melendez-Calderon , Waydy Mitchell, Ryan Bell	EPIC-Tech: Engineering and Physiotherapy Interdisciplinary Collaboration with Technology – exploration of a transdisciplinary approach to allied health services at PAH	Conducted at Princess Alexandra Hospital

Research Activity With a Specific Focus on First Nations People

Lead Investigator Name (RBWH staff in bold)	Other Study Investigators (RBWH staff in bold)	Research Project Title	Number of RBWH Patients Recruited in 2023
Victoria McCreanor	Kirsten Vallmuur , Geoffrey Binge, Emma Bosley, Kerriane Watt, M Allen, Susanna Cramb , Shannon Dias, Genevieve Westacott , Arpita Das	Research co-production with First Nations Australians: informing emergency and injury-related health services research with Aboriginal and Torres Strait Islander perspectives: Phase 1	Literature reviews – do not involve patient recruitment

Research Publications

Authors

Investigator	ORCID ID	Investigator	ORCID ID
Michael Schuetz	https://orcid.org/0000-0003-2808-0631	Susanna Cramb	https://orcid.org/0000-0001-9041-9531
Jeffrey Lipman	https://orcid.org/0000-0002-5965-9876	Brett Droder	https://orcid.org/0000-0003-0028-0447
Kirsten Vallmuur	https://orcid.org/0000-0002-3760-0822	Silvia Manzanero	https://orcid.org/0000-0002-5294-7082
Cate Cameron	https://orcid.org/0000-0003-1476-5744	Esther Jacobson	https://orcid.org/0000-0003-3495-7487
Beat Schmutz	https://orcid.org/0000-0002-2362-5762	Arpita Das	https://orcid.org/0000-0002-1065-4660
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Alejandro Melendez-Calderon	https://orcid.org/0000-0002-7922-1345	Genevieve Westacott	https://orcid.org/0000-0002-4043-858X
Clifford Afoakwa	https://orcid.org/0000-0002-8551-3651		

Publications in 2023

Journal Articles (RBWH staff in bold)

Adiraju SK, Sumi CD, Pandey S, Cotta MO, **Roberts JA, Lipman J**, et al. Quantification of levetiracetam in plasma and urine and its application to a pharmacokinetic study of traumatic brain injury patients. *Bioanalysis*. 2023;15(1):31-42. <https://doi.org/10.4155/bio-2022-0230>

Alli A, Paruk F, Roger C, **Lipman J**, Calleemalay D, Wallis SC, Scribante J, Richards GA, **Roberts JA**. Peri-operative pharmacokinetics of cefazolin prophylaxis during valve replacement surgery. *PLoS One*. 2023;18(9):e0291425. <https://doi.org/10.1371/journal.pone.0291425>

Beraldi-Magalhaes F, Parker SL, Sanches C, Garcia LS, Souza Carvalho BK, et al. (inc. **Lipman J, Roberts JA**). Is the Pharmacokinetics of First-Line Anti-TB Drugs a Cause of High Mortality Rates in TB Patients Admitted to the ICU? A Non-Compartmental Pharmacokinetic Analysis. *Trop Med Infect Dis*. 2023;8(6):312. <https://doi.org/10.3390/tropicalmed8060312>

Billot L, **Lipman J**, Brett SJ, De Waele JJ, **Cotta MO**, Davis JS, Finfer S, Hammond NE, Knowles S, McGuinness S, Myburgh J, **Paterson DL**, Peake S, Rajbhandari D, Rhodes A, **Roberts JA**, Roger C, Shirwadkar C, **Starr T**, Taylor C, **Dulhunty JM**, BLING III Investigators. Statistical analysis plan for the BLING III study: a phase 3 multicentre randomised controlled trial of continuous versus intermittent β -lactam antibiotic infusion in critically ill patients with sepsis. *Crit Care Resusc*. 2023;23(3):273-284. <https://doi.org/10.51893/2021.3.OA4>

Boulet N, Boussere A, Mezzarobba M, Sofonea MT, Payen D, **Lipman J, Laupland KB**, et al. Intensive Care Unit activity in France from the national database between 2013 and 2019: More critically ill patients, shorter stay and lower mortality rate. *Anaesth Crit Care Pain Med*. 2023;42(5):101228. <https://doi.org/10.1016/j.accpm.2023.101228>

Brimm D, Roe J, Warren J, Smyth T, Vallmuur K, Banu S. The epidemiology of sports and leisure-related injury hospitalisations in Queensland: A five-year review. *Injury*. 2023;54(6):1532-1540. <https://doi.org/10.1016/j.injury.2023.04.035>

Butterfield M, **Bodnar D, Williamson F**, Parker L, Ryan G. Prevalence of secondary insults and outcomes of patients with traumatic brain injury intubated in the prehospital setting: a retrospective cohort study. *Emerg Med J*. 2023;40(3):167-74. <http://dx.doi.org/10.1136/emered-2022-212513>

Cameron CM, Vuong K, **McWhinney B, Zournazi A, Manzanero S, Warren J, Mitchell G, McCreanor V, Vallmuur K**, Howell T, **Ungerer JP**. Prevalence of alcohol consumption in emergency presentations: Novel approach using two biomarkers, ethanol and phosphatidylethanol. *Drug Alcohol Rev*. 2023;42(1):146-56. <https://doi.org/10.1111/dar.13534>

Cameron CM, Vuong K, **McWhinney B, Zournazi A, Manzanero S, Warren J, Mitchell G, Vallmuur K**, et al. Factors associated with higher alcohol concentrations in emergency department presentations: PACE study. *Drug Alcohol Rev*. 2023;42(7): 1796–1806. <https://doi.org/10.1111/dar.13744>

Cameron CM, Shibl R, **Cramb S, McCreanor V, Proper M, Warren J, Smyth T**, Carter HE, **Vallmuur K**, Graves N, Bradford N, Loveday B. Community Opioid Dispensing after Injury (CODI): Cohort characteristics and opioid dispensing patterns. *Injury*. 2023;111216. <https://doi.org/10.1016/j.injury.2023.111216>

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Book Chapters (RBWH staff in bold)

Nanda G, **Vallmuur K**, **Catchpoole J**, Lehto MR. A Bayesian Network-Based Semi-automated Injury Classification System. In: Duffy VG, Lehto M, Yih Y, Proctor RW, editors. *Human-Automation Interaction: Manufacturing, Services and User Experience*. Cham: Springer International Publishing; 2023. p. 565-576. https://doi.org/10.1007/978-3-031-10780-1_31

Sonderegger SE, **Manzanero S**, Woodruff TM, Farouqa J, Nabizadeh J, Panagides N, Rolfe BE. Chapter 3. The role of the complement system in cancer etiology and management. In: Niederhuber JE, editor. *Clin Immuno-Oncol*. New Delhi: Elsevier; 2024. p. 41-60.e10

Keynote or Plenary Lectures given in 2023

Date	Title
6/04/2023	Lipman J. Optimizing antibiotic pharmacokinetic/pharmacodynamics for Gram-negative infections in critically ill patients. (Invited speaker). National Congress of Vietnam Association of Emergency, Intensive Care Medicine and Clinical Toxicology, Virtual. Vietnam
20/04/2023	Melendez-Calderon A. Assessing movement after neuromuscular impairments: opportunities of using open-source wearables and RADAR-Base. (Invited speaker). RADAR-base Mobile Health Symposium 2023. Utrecht, Netherlands
23/05/2023	Barker R. Safe sleep environment through product safety and regulation of infant products. (Invited Speaker). Australian and New Zealand Child Death Review and Prevention Group Conference, Virtual
23/05/2023	Vallmuur K. Insights from linked injury data to improve understanding and prevention of child deaths. (Invited Speaker). Australian and New Zealand Child Death Review and Prevention Group Conference, Virtual
26/05/2023	Peters N, Williamson F, Richard C. Low-level versus high-level disinfection of ultrasound transducers after standardised contamination on skin: A non-inferiority randomised controlled trial. ULTIMO. 29th Annual International Conference of the Australasian Sonographers Association. Brisbane. <i>2023 Gilbert Brown Prize winner for the best contribution to the free research paper session</i>
14/07/2023	Cramb S. The Truth about Academia. (Keynote speaker). 4 th Annual Impact Markers Conference. Brisbane
5/09/2023	Vallmuur K. Overview of the QLD Compensation Linkage and Injury Management Study. (Invited Speaker). Healthy Working Lives Injury and Disability Insurance Data Interest Group, Monash University. Virtual
24-28/09/2023	Meléndez-Calderón A. (Program co-chair). International Conference on Rehabilitation Robotics (ICORR). RehabWeek 2023. Singapore
24/09/2023	Meléndez-Calderón A. Robot-assisted gait measures and their relationship with individual walking ability. (Invited Speaker). International Consortium on Rehabilitation Technology (ICRT). RehabWeek 2023. Singapore
6/10/ 2023	Barlas P. Acupuncture in the time of Covid 19 and beyond: challenges, threats & opportunities. (Invited speaker). IGNITE Australian Physiotherapy Association Conference. Brisbane
12-15/10/2023	Schuetz M, Vallmuur K. (Scientific Committee Members). Trauma 2023 Conference. Melbourne
13/10/2023	Pollard C. Epidemiology of Trauma in Australia and New Zealand: now and into the future. (Keynote speaker). Trauma 2023 Conference. Melbourne
14/10/2023	Vallmuur K. The Future of Injury Prevention. (Session Chair). Trauma 2023 Conference. Melbourne
20/10/2023	Schuetz M. Case 1: A 74-year-old female is not able to walk after hip fracture treatment. How can we revise it? (Panel member). 45th Annual Meeting of Royal College of Orthopaedic Surgeons of Thailand and the 43rd Annual Meeting of ASEAN Orthopaedic Association. Pattaya, Thailand
20/10/2023	Schuetz M. Current Concepts in the treatment of Fracture Related Infections. (Invited Speaker). 45th Annual Meeting of Royal College of Orthopaedic Surgeons of Thailand and the 43rd Annual Meeting of ASEAN Orthopaedic Association. Pattaya, Thailand
22/10/2023	Schuetz M. The ingredients to improve orthopaedic clinical care through translational research in Australia. (Invited speaker). 45th Annual Meeting of Royal College of Orthopaedic Surgeons of Thailand and the 43rd Annual Meeting of ASEAN Orthopaedic Association. Pattaya, Thailand
27/10/2023	Melendez-Calderon A. Advances in Neurophysiology and Neural Rehabilitation Engineering of Movement. (Invited speaker). 11th Aalborg Symposium. India
3/11/2023	Vallmuur K. Reconstructing the orthopaedic patient journey through data: Current and future opportunities. (Keynote speaker). Princess Alexandra Hospital Orthopaedic Research Showcase. Brisbane
14/11/2023	Vallmuur K. A scheme for the future? (Plenary speaker). Injury and Disability Schemes Seminar 2023. Hobart
16/11/2023	Foster A. Fracture related infection: a 10-year population based epidemiological and health economic study. 2023 AOA Annual Scientific Meeting. Melbourne <i>QLD Best State Paper</i>
17/11/2023	Vallmuur K. Injury Statistics, risk factors and patterns. 2023 Trauma Symposium: e-Mobility – current perspectives and future directions/ (Invited speaker). Royal Australasian College of Surgeons. Brisbane