

'RBWH and RBWH Foundation Research Project Grants application form

For medical, nursing, allied health and health practitioner graduates

Funding commencing in 2018

Applications open 17 July 2017

Applications close 5.00 pm Thursday 31 August 2017

If you experience any difficulty completing this form, please contact the Research Support Officer, RBWH on RBWH-Project-Grant-Application@health.qld.gov.au <mailto:or> (07) 3646 2377.

1. Chief Investigator

Name	Rajesh Pratap Singh
Research group (if relevant)	
Mailing address	3/60-66 Cowie Rd, Carseldine. 4034
Mobile phone number	0413428047
Other phone number	36464319 pager#42183
Email address	Raj.singh@health.qld.gov.au ; rajesh_pratap@rediffmail.com

2. Research Project summary

Project title	Dose exercise provided via circuit training in addition to usual physiotherapy be feasible and improve balance and functional outcome in GEM patients?
Please indicate type of research:	<input type="checkbox"/> Basic Science Research <input checked="" type="checkbox"/> Clinical Research <input type="checkbox"/> Translational Research <input type="checkbox"/> Health Services Research
Please indicate your CIA category:	<input checked="" type="checkbox"/> Early Career Researcher <i>(see Advice to Applicants for definition)</i> <input type="checkbox"/> Other Researcher
If Early Career Researcher; please nominate up to 2 research mentors: <i>(the named mentors)</i>	1. Professor Suzanne Kuys National Head, School of Physiotherapy, Faculty of Health Sciences Australian Catholic University, Brisbane Campus Contact: T: +61 7 38616049 M: +61475833901 Email: Suzanne.kuys@acu.edu.au



<i>should also appear in section 3)</i>	<p>2. Dr Jennifer Paratz Chair and Research Fellow Burn, Trauma and Critical Care Research Centre (BTCCRC) Royal Brisbane & Women's Hospital Department of Intensive Care Medicine Level 3, Ned Hanlon Building Royal Brisbane and Women's Hospital Butterfield Street, Brisbane, QLD,4029 Contact (07) 36461980 Email : j.paratz@uq.edu.au</p>
Have you applied or intend to apply for funding for this research elsewhere? <i>(please describe)</i>	No

3. Previous Grants/Scholarships

Have you previously had an RBWH Foundation Grant or Scholarship? Detail below

Title of grant <i>(add additional rows as necessary)</i>	Investigators	Research Team	Total funding	Years
Improving outcome in burns – pharmacological management and intensive exercise	Paratz J, Muller M, Plaza A	Physiotherapy & Burns	RBWH Research Foundation	\$39,000
A Biomarker for Sepsis to Thwart Antibiotic Overuse in the Intensive Care Unit	Denny K, Cohen J, Lipman J, Paratz J , Dulhunty J, Evans D, Pretorious C, Paterson D	RBWH Research Foundation	\$56,000	2015-2016
Identification and location of secretion retention in mechanically ventilated patients	Paratz J , Thomas P, Ntoumenopolous G, Jones A, Li Bassi G, Torres A	RBWH Foundation	\$40,000	2015-2017
Prevention of burn injury - the neural correlates of risk-taking behaviours	Muller M, Paratz J , Reutens D, Burianova H, Dulhunty J	RBWH Foundation	\$58,247	2014-2016
Extension of burns prevention media campaign Fund	Muller M, Paratz J , Redman B, Harrison J, Dulhunty J	RBWH Private Practice Trust	\$55,000	2014-2016
Improving outcome in Sepsis	Boots R, Paratz J, Kenardy J , Comans T, Mitchell G, Coyer F	Sepsis RBWH Research Foundation	\$40,000	2013-2015
Are burns patients at increased risk of cardiovascular disease?	Paratz J , Paul S, Younger J, Cohen J, Muller M	RBWH Research Foundation	\$40,000	2013-2015
Assessment of the Cerebral Microcirculation after Head Injury	Bellapart J, Fraser J, Boots R, Reade M, Paratz J	Defence Health Foundation	\$33,000	2013-2015

4. Research proposal section

Full title of proposed project <i>(This will be used throughout the funding process and must not be changed)</i>	Dose exercise provided via circuit training in addition to usual physiotherapy be feasible and improve balance and functional outcome in GEM patients?	
Short title of proposed project (if any)	GUCCI-program (GEM Unit Circuit Group Intervention)-program	
Details of where you plan to undertake your research project	Institution:	Royal Brisbane and Women's Hospital
	Dept:	Physiotherapy
Name of Head of Department in which you will conduct the research	Mark Cruickshank	

Brief description of the proposed project *(maximum 100 words)*

Exercises typically provided to patients in GEM unit are delivered one-to-one by a physiotherapist. This mode of delivery has been shown to deliver an insufficient dose of exercise to optimize recovery and outcomes. In contrast, exercises provided to people in GEM unit via circuit classes may help improve patient balance and functional outcomes. This randomized controlled trial seeks to determine that it is feasible to run circuit class and improve balance and functional outcomes more than usual physiotherapy alone in older people undergoing rehabilitation in GEM unit.

Background *(maximum 200 words)*

Older people admitted to GEM unit are quite frail presenting with multiple co-morbidities and often slow progression of functional recovery. Typically, a daily physiotherapy session is provided to patients; comprising various exercises delivered via a one-to-one individual session. The evidence suggests that to improve balance and function in people admitted to inpatient rehabilitation increased dose and intensity of rehabilitation is required. This year a quality activity (Oracle ID 893) was conducted in GEM unit in which exercises were provided via a circuit class format in addition to usual physiotherapy. On this pilot randomized controlled trial of 30 participants, those randomized to the experimental group participated in circuit class 3 times per week in addition to usual care. Final results showed a significant improvement in balance and functional outcome. This proposed study extends this quality activity to investigate the feasibility of this intervention and provide effect size estimates to inform a powered study to formalize the results.

Research aims and objectives

AIMS:

1. Investigate the feasibility of running exercise via circuit training in GEM unit.
2. To investigate whether additional exercise provided via circuit training improves outcomes including composite balance measure (CBM), balance outcome measure for elder rehabilitation (BOOMER), functional independence measure (FIM), reduce falls, length of stay and hospital readmission within 1 month of discharge than usual physiotherapy.

Research plan *(maximum 2 pages)*

Research problem:

Hospitalization of older adults appears to result in functional decline mostly likely due to reduced activity level (1). Bed rest and low level of mobility were common occurrences during hospitalization of older adults (2). On average, these hospitalized older adults only spend 43 min a day standing or walking and 80% of their hospital stay is spent in bed (3). While it is acknowledged that bed rest and inactivity are detrimental for mobility and function, it is often observed that patients in the Geriatric Evaluation and Management (GEM) Unit are inactive during day hours. Physiotherapists play a crucial role in maximising patient mobility and independence through the prescription and delivery of exercise programmes (4). The type and intensity of exercise are important factors in determining patient outcome. Systematic reviews have found that weight bearing and targeted task specific exercises can improve balance (5) and decrease falls (6) in older people. Usual care physiotherapy provided in GEM unit consists of one-to-one individualised

session. Exercises provided in groups via circuit training have shown benefits in improving balance in frail older people in the inpatient setting (7). Very little is known about the delivery of circuit class (therapy provided to more than 2 participants, involving a tailored intervention program with a focus on practice of functional task received in group setting (8)) in older people admitted to GEM unit who have multiple comorbidities and reduced physical capacity. This study sought to determine if additional exercise provided via circuit training improves balance and functional outcome more than usual physiotherapy alone in adults undergoing rehabilitation in GEM unit.

Research hypothesis/Question and outcomes:

Hypothesis: Exercise provided via circuit training in addition to usual physiotherapy will be feasible and will improve balance and functional outcome compared to usual physiotherapy alone.

Aims: 1) Investigate the feasibility of running exercise via circuit training in GEM unit. 2) To investigate whether additional exercise provided via circuit training improves outcomes including composite balance measure (CBM), balance outcome measure for elder rehabilitation (BOOMER), functional independence measure (FIM), reduce falls, length of stay and hospital readmission within 1 month of discharge than usual physiotherapy.

Research design/Method: A two group, parallel, randomised control trial conforming to CONSORT guidelines, with blinded assessment, concealed allocation and intention-to treat analysis will be conducted with patients admitted to the GEM unit at RBWH. A total of 96 participants will be randomly allocated to one of the two groups receiving different level of exercises. All participants will continue to receive usual physiotherapy. Participants will be assessed at admission and discharge.

Population and sample: Participants aged 65 years or older and more admitted to GEM unit will be eligible to participate in the study. Patients admitted to the GEM unit will be screened and invited to participate in the study and provide written informed consent if they meet the eligibility criteria.

Inclusion criteria: Aged 65 years and older, can stand at least 30 sec without assistance, may require maximum of one person assistance to complete functional task such as sit to stand or walking, can follow simple commands, able to participate in weight bearing exercises. **Exclusion criteria:** Medically unstable, pre-morbid non-ambulant, admitted to palliation, weight-bearing restriction, inappropriate behaviour or cognition for group therapy. Once recruited, participants will undergo blinded assessment. Following this, participants will be randomised. An offsite investigator not involved in participant recruitment, assessment or delivery of the intervention will undertake randomisation. Clinical and demographic information will be retrieved from medical chart including FIM, falls and length of stay.

Sample size: Based on a previous study investigating circuit training in older adults undergoing rehabilitation a between group difference in the primary measure, the Short Physical Performance battery (SPPB) score, of a mean change of 1 and standard deviation of 1.7, aiming for a beta error rate of 0.20 and an alpha error rate of 0.05 for a 2 tailed test, 40 subject per group are required. Allowing for 20 % drop out due to the frailty of the population, 48 participants per group are required.

Intervention group: Participants in the experimental group will participate in circuit classes 3 sessions /week in addition to their usual physiotherapy. The circuit group will consist of 6 different stations with each station comprising an exercise to be maintained for 3 minutes in a standing position. All exercises will be tailored to individual participants by senior therapist. Participants will be encouraged to complete their exercise station with minimal supportive aids or equipment. A senior therapist and physio assistant with the ratio of 1: 3 patients will run the group. Participants in the experimental group will continue to receive usual physiotherapy.

Control group: Participants in the control group will receive usual physiotherapy which consist of one to one physiotherapist prescribed exercises program delivered by either the ward physiotherapist or physiotherapist assistant. Exercise programs are individualised to patient needs and will include exercises such as bed exercises, targeted strengthening exercises, functional exercises or walking program.

Outcome measure: All outcome measures will be measured by a blinded assessor at study admission and hospital discharge.

Primary Measure: CBM: Comprises five standing balance tests: Feet apart, feet together, semi tandem, tandem, and single leg stance. Each test will be performed without any hand support and timed up to max of 10 sec each. The sum of all tests is =/50. This test is based on SPPB (short physical Performance battery) (9)

score and has been found to predict falls in inpatient rehabilitation (10). **Secondary:** BOOMER: Comprises four previously validated tests including timed up and go, functional reach, step test, and standing balance test of feet together eyes closed. Test results are scored using a 5 point ordinal scale (0-4) with a maximum of 16 (11). FIM, length of stay, number of circuit classes attended, falls during hospital stay including location will be retrieved from medical chart. 1-month hospital readmission rates will be collected via records and participant phone call.

Data analysis: Data will be checked for normality prior to analysis. Descriptive statistics will be undertaken to describe the sample. Between group analyses, either independent t-test or non- parametric Kruskal-Wallis test will be used to compare the composite balance score, BOOMER, FIM, and LOS, between groups over time. Hospital readmission and number of falls will be compared between group by a chi square crosstabs.

Time frame: 96 participants can be required in 1 year as the admission rate to GEM is 415 patients per year.

How findings of the study will be used: Findings will be utilized to inform the inclusion of circuit group as usual practice in model of care in GEM unit. Manuscript will be used to inform further powered study. Also results will be presented in relevant conferences etc.

5. Budget

Justification of Budget:

Please detail and justify requirements for project related to methodology

Personnel	<ol style="list-style-type: none"> 1. Backfill for PI – this is to enable the PI to complete an ethics application, screen patients, gain consent, complete demographic information for each patient and undertake general administration for the trial. 2. Blinded assessor – As this is a randomised controlled trial, a blinded assessor is required to conduct assessments of participants prior to randomised allocation and intervention commencement as well as prior to discharge from hospital (study end point).
Equipment	Nil
Other Costs	Nil

Budget		
Personnel		
1. Rajesh Singh (PI) HP4 (3) @ \$52.41 per hour x 8 hours x 48 weeks	\$20,125	
2. Blinded assessor (HP3(7) @\$49.14 per hour x 98 subjects x 4 hours	\$19.262	
	\$	
	\$	
Total personnel costs		\$39.387
Equipment		
	\$	
	\$	
	\$	
	\$	
Total equipment costs		\$0
Other costs		

	\$	
	\$	
	\$	
	\$	
	\$	
Total other costs		\$0
		\$39.387
Funding requested: \$39.387		

6. Investigative Information

6.1 List all CIs involved in the project (add additional rows as necessary) Note: A brief summary CV of the past three years (maximum two pages each) will need to be submitted for each chief investigator

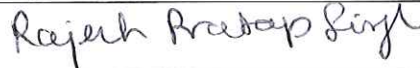

Name	Position	Research group	Academic qualifications	E-mail address	Hours/week on project
CI-A Singh	Senior physiotherapist		M Phty, B Phty	Raj.singh@health.qld.gov.au	8
CI-B Kuys	National Head, School of Physiotherapy		PhD, B Phty (hons)	Suzanne.kuys@acu.edu.au	2
CI-C Paratz	Principal Research fellow. RBWH, UQ & Griffith University		PhD, MPhty, FACP,	J.Paratz@uq.edu.au	2
CI-D					
CI-E					

6.2 List all AIs involved in the project (add additional rows as necessary)

Name	Position	Academic qualifications
Rajesh Pratap Singh	Senior Physiotherapist	MPhty, B Phty
Suzanne Kuys	National Head, School of Physiotherapy	PhD, B Phty (hons)
Jennifer Paratz	Principal Research fellow. RBWH, UQ & Griffith University	PhD, MPhty, FACP

7. Certifications

7.1 Certification by all Chief Investigators (add lines as necessary)


Name	Signature	Date
CI-A Rajesh Pratap Singh		29 August 2017
CI-B Suzanne Kuys		28 August 2017
CI-C Jennifer Paratz		31 August 2017

7.2 Certification of Head of RBWH Department

I certify that the project is appropriate to the general facilities in my Department and that I am prepared to have the project carried out in my Department.

Department Head: PERRY JUDD, A/DIRECTOR PHYSIOTHERAPY RBWH

Department: PHYSIOTHERAPY

Signature: 

Date: 31.8.17

Other departmental support (financial/facilities) to be provided for the proposed research project

7.3 Certification of Head of Supporting Department (if any)

I certify that the project is appropriate to the general facilities in my Department and that I am prepared to have the project carried out in my Department.

Department Head: N/A

Department:

Signature:

Date:

Other departmental support (financial/facilities) to be provided for the proposed research project:

8. FUNDING RECEIVED BY ALL CHIEF INVESTIGATORS FOR THE YEAR 2017

Title of grant (add additional rows as necessary)	Investigators	Research Group	Funding organisation	Total funding	Years
Understanding student contribution to health services and the transition from student to new graduate in the Queensland Public Health Sector: a perspective from the profession..	Stoikov S, Shardlow K, Gooding M, Kirwan G, Kuys S		Directors of Physiotherapy Services Queensland (DOPSQ) Clinical Education Training Initiative	\$19,130.	2017-2018
Using accelerometers to improve beneficial activity behaviours, reduce fatigue and risk of chronic disease after stroke – a pilot study.	Mahendran N, Preston E, Kuys S, Brauer S		University of Canberra, Faculty of Health Sciences Near Miss Research Support Funding	\$10,000	2017
Improving outcome in burns – pharmacological management and intensive exercise	Paratz J, Muller M, Plaza A	Physiotherapy & Burns	RBWH Research Foundation	\$39,000	2017-2018



9. INSTRUCTIONS FOR SUBMISSION

1. Complete all sections of this application form
2. Obtain the necessary signatures
3. Scan the signed application form
4. Scan your CV and the brief CV (2 pages) of each of the chief investigators
5. Name scanned documents:
[Surname_FirstName_2018ProjectGrant_DocumentName]
6. Email all scanned documents to:
RBWH-Project-Grant-Application@health.qld.gov.au (NB: hyphens not underscore)
7. Documents to be scanned and emailed as one pdf.
 - (i) Application form
 - (ii) CV of each chief investigator
8. **Applications close at 5pm, on Thursday 31 August 2017. Late and/or incomplete applications will not be accepted.**

Reference:

1. Brown CJ, Friedkin RJ, Inouye SK. Prevalence and outcomes of low mobility in hospitalized older patients. *J AM Geriatr Soc* 2004; 52: 1263-70
2. Fischer, SR, Kue, YF, Graham et al Early ambulation and length of stay in older adults hospitalized for acute illness. *Archives of Internal Medicine* 2011; 170: 1942-43
3. Brown CJ, Redden DT, Kellie et al The under recognised epidemic of low mobility during hospitalization of older adults. *J Am Geriatr Soc* 2009; 57:1660–65
4. Bachmann S, Finger C, Huss et al Inpatient rehabilitation specifically designed for geriatric patients: systematic review and meta-analysis of randomized controlled trials *BMJ* 2010; 340: c1718
5. Durward BR, Rowe PJ. What is balance? *Clin Rehabil* 2000; 14: 402–6.
6. Howe TE, Rochester L, Jackson et al Exercise for improving balance in older people *Cochrane Database Syst Rev* 2007: CD004963.DOI:10.1002/14651858.CD004963.pub3
7. Treach D, Schurr K, Lloyd Bradley et al *Age and Ageing* 2015; 44: 580–86
8. English, CK, Hillier SL et al. (2007). Circuit class therapy versus individual physiotherapy sessions during inpatient stroke rehabilitation: a controlled trial. *Archives of Physical Medicine and Rehabilitation* 88(8): 955-63.
9. Guralnik JM, Simonsick EM, Ferrucci L et al A Short Physical Performance Battery assessing lower extremity function: association with self-reported disability and prediction of mortality and nursing home admission. *J Gerontol A Biol Sci Med Sci*1994; 49: 85–94.



10. Sherrington C, Lord SR, Close et al. Development of a tool for prediction of falls in rehabilitation settings (Predict_FIRST): a prospective cohort study. *J Rehabil Med* 2010; 42: 482–8.
11. Kuys, SS, Morrison, G, Bew, et al Further validation of the balance outcome measure for elder rehabilitation. *Archives of physical medicine and rehabilitation* 2011; 92(1), 101-105

Résumé of Rajesh Pratap Singh

Address: 3/60-66 Cowie Road,
Carseldine. Qld. 4034

Mobile: 0413428047

E-mail: raj.singh@health.qld.gov.au
Rajesh_pratap@rediffmail.com

EDUCATION HISTORY

- 2008** Australian Physiotherapy Council
Skill Assessment Completed.
- 2006-2007** Master of Physiotherapy (Neurology)
University Of Queensland
Australia
- 2005-2006** Master of Physiotherapy (Clinical)
University Of Queensland (Australia)
- 2004** Grad. Certificate in physiotherapy
University of Queensland
Australia
- 2002** Bachelor of Physiotherapy
Bangalore University
India

EMPLOYMENT HISTORY

Royal Brisbane Women's hospital (HP4.3) and HP5 for 1/week April 2015-current (full time)

So far in this short period in RBWH my highlights have been learning more about acute patients in Acute neuroscience including rehabilitation, medical, Cardio respiratory including Intensive Care unit.

Teaching and training has been my passion which has range from training new graduates, students and presenting in-service to staff on various topic such as body weight support treadmill training and circuit group training, pushers syndrome.

Highlights:

1. Principal organizer for journal club with in the acute neuroscience group.
2. Principal organizer for Upper limb rehabilitation workshop (2016) which involved budget preparation, registration form and organization of the whole workshop.
3. Principal facilitator towards starting physiotherapy service to Friedreich Ataxia clinic in RBWH (2016)
4. Presented in Queensland Rehabilitation Professional Network (QRPN)
 - Training stroke population for Bridge to Brisbane -2015
 - Amount of dose possible in circuit group in acute stroke unit - 2016
5. Invited by APA to teach Neurological Level 1 course for 2015 and 2016 for gait assessment and treatment.

Community Transition Care Service February 2014 - June 2014

Position: Physiotherapist (full Time)

During my short period in CTCS, I initiated discussions and acted efficiently with available resources within team members of physiotherapy to achieve waiting list to negligible number.

Also during this period I proposed, formed a working party and gave a frame work towards management of home exercise program, which in one of the key performing indicators for the service.

I also initiated discussion around improving case conferences with in multidisciplinary team and draft form for presenting cases which reduced and streamline discussion and length of stay with clear outcome for patients.

Sub-Acute Rehabilitation at Brighton

July 2010- April 2015

Position: Physiotherapist (full time)

Working in rehabilitation has been so far the best part of my professional career. My involvement with physiotherapy and multidisciplinary team has been highlighted with various self initiated clinical research projects and quality activities. Some of the examples are:

- Intensity of practice with in stroke population in a rehab setting,
- Enriched environment circuit group training in gym and on ward,
- Abstract and poster presentation at Smart Stroke conference for “Multidisciplinary management of Unilateral neglect patient in a rehab”
- Along with the above my contribution towards improvement of service delivery and to other stakeholders have help the rehab setting to improve its performance towards length of stay (LOS).

In 2014 I was nominated for top five allied health professional Stroke Care Champion by National Stroke Foundation towards my contribution for stroke population.

I was also awarded for the Best Stroke week award 2014

Princess Alexandra Hospital.

July 2008- June 2010:

Physiotherapist (Temporary full time)

My position at PA hospital was on a rotational basis during which I did placements in Intensive Care Unit, Spinal Unit, Infectious disease ward, Cardio-respiratory, Cancer ward, Palliative ward, Acute Neurology, Rehabilitation and Outpatient Musculoskeletal.

PROFESSIONAL MEMBERSHIP

**Physiotherapists Board of Queensland
Registration Number: PHY0000975965
Valid until: 30th November 2017**

**Australian Physiotherapy Association
Neurology- Titled member (2012)
Membership No. 68897**

Member of National Neurology Group (QLD)

CURRICULUM VITAE

PERSONAL INFORMATION

- ❑ Full Name: Suzanne Shanelle Kuys
- ❑ Address: 16 Mayfair Close, WISHART QLD 4122, AUSTRALIA
- ❑ Telephone: (07) 3861 6049 (Work)
0475833901 (Mobile)
- ❑ Email: suzanne.kuys@acu.edu.au

EDUCATION SUMMARY / QUALIFICATIONS

2009	Doctor of Philosophy	University of Queensland
2001	Post Graduate Diploma of Public Health	University of Queensland
1992	Bachelor of Physiotherapy 1st Class Honours	University of Queensland
1986	Bachelor of Educational Studies	University of Queensland
1983	Bachelor of Human Movement Studies Education	University of Queensland

AWARDS AND HONOURS

- ❑ 2016: Best paper for Foot-related conditions in hospitalised populations: a literature review. Wound Practice and Research Journal.
- ❑ 2013: Stroke Society of Australasia Nursing and Allied Health Scientific Award for Glenohumeral joint position, motor recovery and shoulder pain in acute post-stroke hemiplegia patients. Stroke Society of Australasia Darwin 2013.
- ❑ 2013: Editors Choice Journals of Gerontology Series A for Gait speed as a measure in geriatric assessment in clinical settings: a systematic review. The Journals of Gerontology Series A: Biological Sciences and Medical Sciences 2013; 68:39-46. IF 4.598
- ❑ 2011: Awarded for Contribution to Physiotherapy Research, Australian Physiotherapy Association Queensland Branch Awards
- ❑ 2011: Awarded Best Poster in CF Special Interest Group at the Thoracic Society of Australia and New Zealand conference, Perth, April 2011
- ❑ 2009: Awarded Doctor of Philosophy
- ❑ 2007: Awarded for Significant contribution to Neurological Physiotherapy, National Neurology Group, Qld of the Australian Physiotherapy Association.
- ❑ 2007: Awarded Australian Physiotherapy Association Title of APA Neurological Physiotherapist.
- ❑ 2006: Awarded Queensland Health Advanced Clinician PO6 (First physiotherapist awarded Advanced Clinician PO6).
- ❑ 2006: Awarded Queensland Health Australia Day Achievement Medal for outstanding service to Queensland Health (1 of 11 awarded).

CURRENT POSITION

- ❑ National Head, School of Physiotherapy, Australian Catholic University

EMPLOYMENT HISTORY

- ❑ 2010-2015: Principal Research Fellow, Cardiothoracic, Metro North Hospital and Health Service and Griffith University
- ❑ 2009 – 2010 Research Fellow, Physiotherapy, Princess Alexandra Hospital and University of Queensland
- ❑ 2006- 2008: Physiotherapist, Princess Alexandra Hospital (0.4 FTE).
- ❑ 2004 – 2008: Lecturer, School of Physiotherapy and Exercise Science, Griffith University. (0.6 FTE).
- ❑ 1999 – 2006 Senior Physiotherapist, Rehabilitation, Princess Alexandra Hospital Health Services District
- ❑ 1998: Personal PO3 in neurological and vestibular rehabilitation awarded
- ❑ 1993: Physiotherapist, PAHHSD

GRANTS AWARDED

- In last five years awarded
 - More than \$2 million in competitive peer reviewed grants
 - Supported and mentored novice researchers to be awarded more than \$120,000
- Awarded NHMRC Postgraduate Scholarship 2007 – 8.

STUDENT SUPERVISION

- Currently supervising: 5 D Philosophy students, 5 M Philosophy students
- Completed supervising: 2 PhD, 2 M Phil, 4 Honours students, all awarded First Class Honours

INVITED REVIEWER

- **Funding Bodies:** Local, interstate, and National Health and Medical Research Council Project Grant panels
- **Journals:** More than 10 peer reviewed international journals

PUBLISHED MANUSCRIPTS

70+ manuscripts published in international peer reviewed journals. Last year includes:

- Mackay CP, Kuys SS, Brauer SG. The effect of aerobic exercise on brain-derived neurotrophic factor (BDNF) in people with neurological disorders: a systematic review and meta-analysis. *Neural Plasticity*. Accepted 10 August 2017
- Tyack Z, Kuys S, Cornwell P, Frakes KA, McPhail S. Impact of multimorbidity on health-related quality of life in a community-based sample: Implications for assessment and intervention. *Chronic Illness*. Accepted 16 June 2017.
- Mathew SA, Varghese P, Kuys SS, Heesch KC, McPhail SM. Gait outcomes of older adults receiving subacute hospital rehabilitation following orthopedic trauma: a longitudinal study. *BMJ Open* Accepted 6 June 2017.
- Stoikov S, Shardlow K, Gooding M, Kuys S. Clinical activity profile of preregistration physiotherapy students during clinical placements. *Australian Health Review* 2017. Epub date 22 June 2017.
- Stewart, C., McCluskey, A., Ada, L. and Kuys, S. (2017), Structure and feasibility of extra practice during stroke rehabilitation: A systematic scoping review. *Australian Occupational Therapy Journal*. doi:10.1111/1440-1630.12351
- Lynch EA, Borschmann K, Callisaya ML, Fini NA, Janssen H, Johnson L, Jones TM, Kramer S, Kuys S, Mahendran N, Simposn DB, English C. Activity monitoring for increasing physical activity in adult stroke survivors. *Cochrane Databases of Systematic Reviews* 2017, Issue 2. Art No.: CD012543. DOI:ç
- Tyack Z, Frakes KA, Barnett A, Cornwell P, Kuys S, McPhail S. Predictors of health-related quality of life in people with a complex chronic disease including multimorbidity. *Quality of Life Research* 2016; 25: 2579-92.
- Mudge, A, McRae P, McHugh K, Griffith L, Hitchen A, Walker J, Cruickshank M, Morris NR, Kuys S. Poor mobility in hospitalised adults of all ages. *J Hospital Medicine*, 2016; 11: 289-291.
- McPhail SM, O'Hara M, Gane E, Tonks P, Bullock-Saxton J, Kuys SS. Nintendo Wii Fit as an adjunct to physiotherapy following lower limb fractures. *Physiotherapy* 2016;102: 217-20.
- Mahendran N, Kuys SS, Brauer SG. Recovery of ambulation activity across the first six months post-stroke. *Gait and Posture* 2016; 49:271-2786.
- Mahendran N, Kuys SS, Brauer SG. Accelerometer and global positioning system measurement of recovery of community ambulation across the first 6 months after stroke: an exploratory prospective study. *Archives of Physical Medicine and Rehabilitation* 2016; 97: 1465-1472
- Mahendran N, Ng P, Downie E. Kuys SS, Brauer SG. Are accelerometers and GPS devices valid, reliable and feasible tools for measurement of community ambulation after stroke. *Brain Impairment* 2016; 17: 151-161.
- Kuys SS, Burgess K, et al. Evidence of improved efficiency in functional gains during inpatient rehabilitation. *American Journal of Physical Medicine and Rehabilitation* Epub 15 April 2016.

PRESENTATIONS – CONFERENCES / WORKSHOPS (last 5 years)

- 11 Invited Speaker presentations, nationally.
- 29 Podium or poster presentations at national and international conferences

CI Dr Jennifer Paratz

Qualifications:

MPhty(UQld), PhD (UQld), FACP (Australian College of Physiotherapists)

Current Role:

- Principal Research Fellow in Health Sciences at Griffith University & Royal Brisbane & Womens' Hospital
- Honorary Senior Research Fellow of the Burns, Trauma and Critical Care Research Centre, School of Medicine, University of Queensland and Royal Brisbane & Women's Hospital.
- Principal in the Queensland Medical Research Institute Program grant "Improving the physical and psychological healing of children with burns and trauma"
- Principal in the Professorial Department of Military Medicine and Surgery
- Physiotherapist to the Royal Brisbane and Women's Hospital. Has completed a Fellowship with specialization in cardiopulmonary physiotherapy.

Top 5 Publications for the past 5 years – 112 in total

1] **Paratz JD**, Lipman J, Boots RJ, Muller MJ, Paterson DL A new marker of sepsis post burn injury? **Crit Care Med** 2014 ;42:2029-36in press This study was proposed, initiated and conducted by the CIA in critically ill burn patients. The paper shows a high level of evidence for new marker of sepsis in burn injury, B-type natriuretic peptide. This paper has the potential to change practice and will be the basis for a multicentre randomized trial this year. Won **Best Medical Paper** at Australian and New Zealand Intensive Care Society in 2014 Was cited in J Burn Care and Res as one of the most influential articles of 2014.

2] Kayambu G, Boots R, **Paratz J** Early physical rehabilitation in intensive care patients with sepsis syndromes - A pilot randomised controlled trial **Intensive Care Med** 2015; 41(5): 865-7 This RCT was the first study to investigate rehabilitation from Day 1 of admission to ICU of patients in severe sepsis and septic shock. It demonstrated a significant increase in the physical scales in SF 36 at six months.

3] Bissett B, Boots RJ, **Paratz J**, Weaned but weary: One third of adult intensive care patients mechanically ventilated for 7 days or more have impaired inspiratory muscle endurance after successful weaning. **Heart & Lung: The Journal of Acute and Critical Care** 2014 Nov 13. pii: S0147-9563(14)00369-0. doi: 10.1016/j.hrtlng.2014.10.001. This article demonstrated that successfully weaned (from mechanical ventilation) patients have persisting problems with endurance and require further rehabilitation.

4] **Paratz JD**, Boots RJ. Dealing with the critical care aftermath: where to from here? **J Thorac Dis.** 2016 Sep;8(9):2400-2402. This was an invited editorial on the exact topic of this application, ie the problem of recovery post intensive care.

5] **Plaza A, Paratz J**, Management of the Acute Burn Patient In Denehy L, Main E Cardiopulmonary Physical Therapy, Churchill Livingstone Elsevier, London 2015 in press. This was an invitation for the CIA and AI Plaza to describe the definitive clinical management of the burns patient. Internationally this is the most widely used undergraduate textbook.

Research & Recognition

- Recent awards 2017 - Clinical Research Award, highly commended metro North Research Excellence, Award; 2016 - Award for Outstanding Leadership in Allied Health Research, Learning & Innovation; 2015 - RBWH Symposium Medal for Research; 2014 - Best Medical paper Australian & New Zealand Intensive Care Society.
- Currently \$8,650,000 in funding 3 x NHMRC project grants

- Currently leading a team of burns researchers, intensivists, cardiologists, scientists, psychologists, epidemiologists, pharmacists and physiotherapists and postgraduate students with published and funded work in studies to investigate:
- Critical care management of burns patients (diagnosis of sepsis, fluid resuscitation, inhalational injury) – (collaborating with Prof Stijn Blot, Belgium) Metabolism & Cardiac risk in burns patients
- Collaborating with Prof Torres, University of Barcelona, Animal Laboratory.
- Current areas of work include a randomized trial in attenuation of proteolysis in sepsis (ACTRN 12610000808044) published Intensive Care Medicine 2016
- Large clinical multi-centre trial on the effect of outpatient multidisciplinary follow-up on survivors of septic shock (ACTRN12613000528752).
- CI on NHMRC grant (APP1079460) on early intervention in critically ill patients with sepsis, collaborating with Prof Dale Needham (USA).
- The other major area is the effect of exercise in disease states including a number of randomized controlled trials in chronic obstructive pulmonary disease, stroke and those with risk factors for cancer. There have been 30 papers and five invited workshops that have emanated from this work. Currently a CI on NHMRC project grant (APP1047426) investigating methods of exercise decreasing future cardiovascular risk in stroke patients.

Supervision and Mentoring:

- Supervised 21 PhD students (14 completed, 7 current), 1 postdoctoral student, 14 masters students, 3 current and 23 Honours students.
- Students have all completed and published and presented both nationally and internationally.
- Two PhD students have received prestigious Menzies Scholarships for their studies.

Invited presentations and workshops:

- Invited to present invited and keynote national and international lectures at Melbourne (2015), South African Burns Society (2013), Australian and New Zealand Intensive Care Society (2012 (Adelaide, 2008 Melbourne) Alfred Symposium (Melbourne 2011), European Society of Intensive Care Medicine, (2007, Berlin) workshops in both management of the critically ill and exercise in chronic disease at the following national and international venues, Singapore (2013, 1996, 2004, 2006, 2007) Melbourne (2011) Perth (2010), as well as a large number of invited and keynote national and international workshops.

Committee membership and other positions:

- A number of national committees for accreditation and specialization, including the immediate past chief censor for the Australian College of Physiotherapists.
- Qld representative for the Australian and New Zealand Burns Association Prevention Committee
- School of Medicine Representative on the U of Qld Human Research Ethics Committee
- Member of the Prince Charles Foundation Research Committee and has been on committees for conference organization in a number of organizations.

Editorial and Peer review Responsibilities:

- Reviewer for *Critical Care Medicine, Anaesthesia and Intensive Care, Intensive Care Medicine, Respiratory Physiology and Neurobiology, Chest, Heart and Lung, Physiotherapy Research International, Australian Journal of Physiotherapy* and a reviewer for grants for the NHMRC, NHMRC Centres of Clinical Excellence, ANZICS, Cystic Fibrosis Foundation and a number of hospital research foundations.
- Editorial board for the journal “Advances in Emergency Medicine”