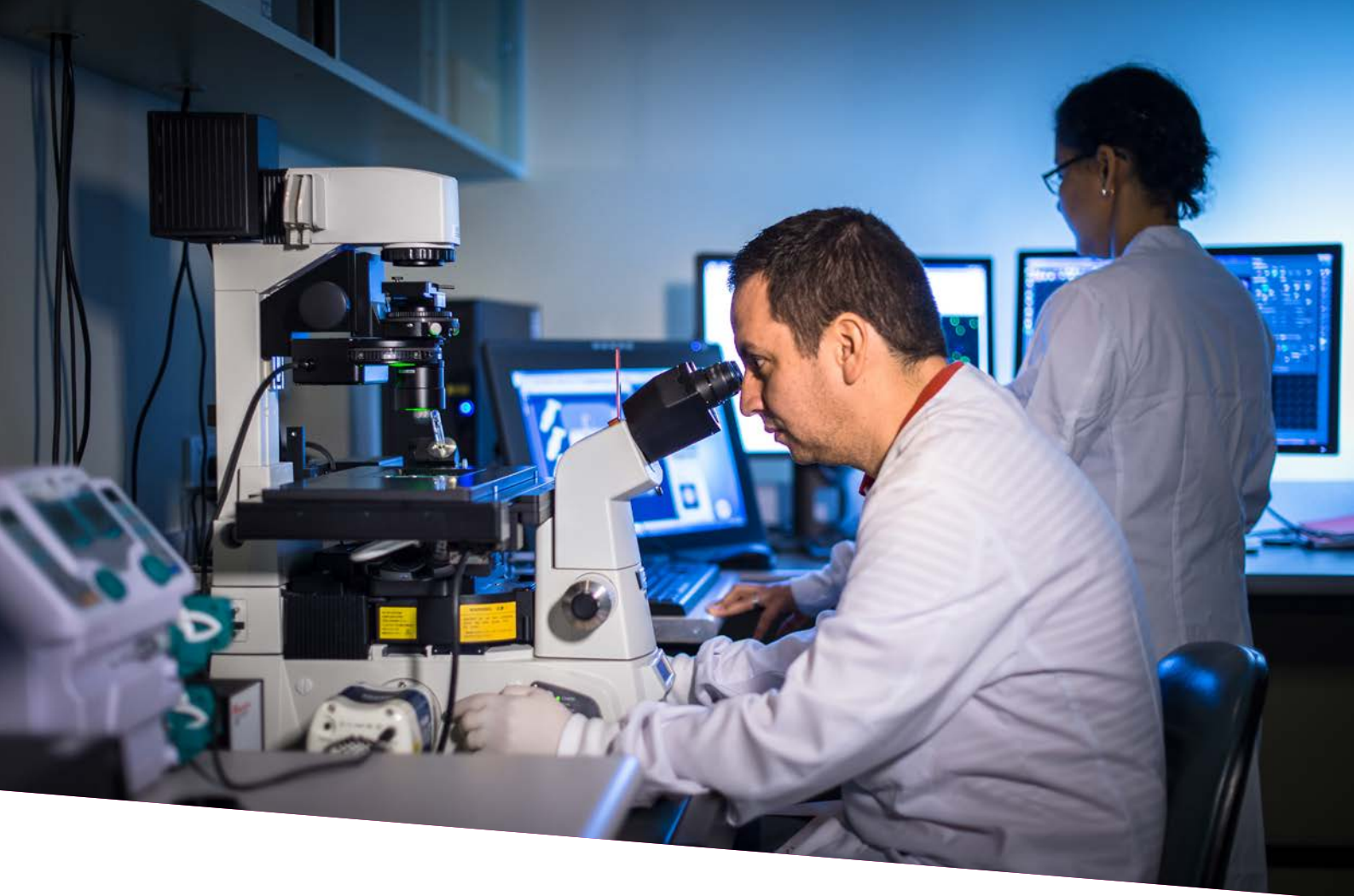


Research Centres & Supervisors

School of Medical & Health Sciences





Contents

Message from the Associate Dean of Research	3	Systems and Intervention Research Centre for Health (SIRCH)	14
ECU Melanoma Research Group	4	Emergency Services Research Group	17
Centre of Excellence for Alzheimer's Disease Research and Care	6	ECU Health Simulation Centre	18
Huntington's Disease Research Group	8	Our Researchers	19
Exercise Medicine Research Institute	9	Research Student Projects	43
Centre for Exercise and Sports Science Research (CESSR)	10		
Communication Disorders Research Group	12		

ECU is committed to reconciliation and recognises and respects the significance of Aboriginal and Torres Strait Islander peoples' communities, cultures and histories. ECU acknowledges and respects the Aboriginal and Torres Strait Islander peoples, as the traditional custodians of the land. ECU acknowledges and respects its continuing association with Nyoongar people, the traditional custodians of the land upon which its campuses stand.

Message from the Associate Dean Research

We invite you to take a journey with us through our diverse, innovative, research foci. Here we showcase areas of significant strength as well as new and explorative research areas. We also introduce you here to some of our world renowned researchers as well as our new, early career researchers who are keen to demonstrate their exciting ideas.

Our research is conducted in world class facilities at our Joondalup campus, Sarich Institute and with our collaborations at Fiona Stanley Hospital, Harry Perkins Institute, other WA Universities and Industry partners. Our aim is to forge new pathways of research translation which lead to improvements in the health and wellbeing of WA and Australian communities.

The School of Medical and Health Sciences is the lead research school at Edith Cowan University. We have three research centres and over 100 Higher Degree by Research students. Together we have brought in over \$40 Million in funding to ECU, produced over 1000 papers, and completed 100 students in the last 5 years.

The research encompasses cancer research, neuroscience, paramedical science, nutrition and dietetics, speech pathology, occupational therapy, exercise and sports science, public health, occupational health and safety, health promotion, addiction studies, and occupational and environmental health.



With such diversity I am certain that you will find a research project that appeals to you, and together we can discover new and stimulating projects that will play an enormous role in driving innovation in Western Australia and contribute to better health outcomes worldwide.

A sincere welcome. I hope you enjoy your journey through the research brochure from the School of Medical and Health Sciences.

If there are any questions, or you wish to have additional information, please contact me.

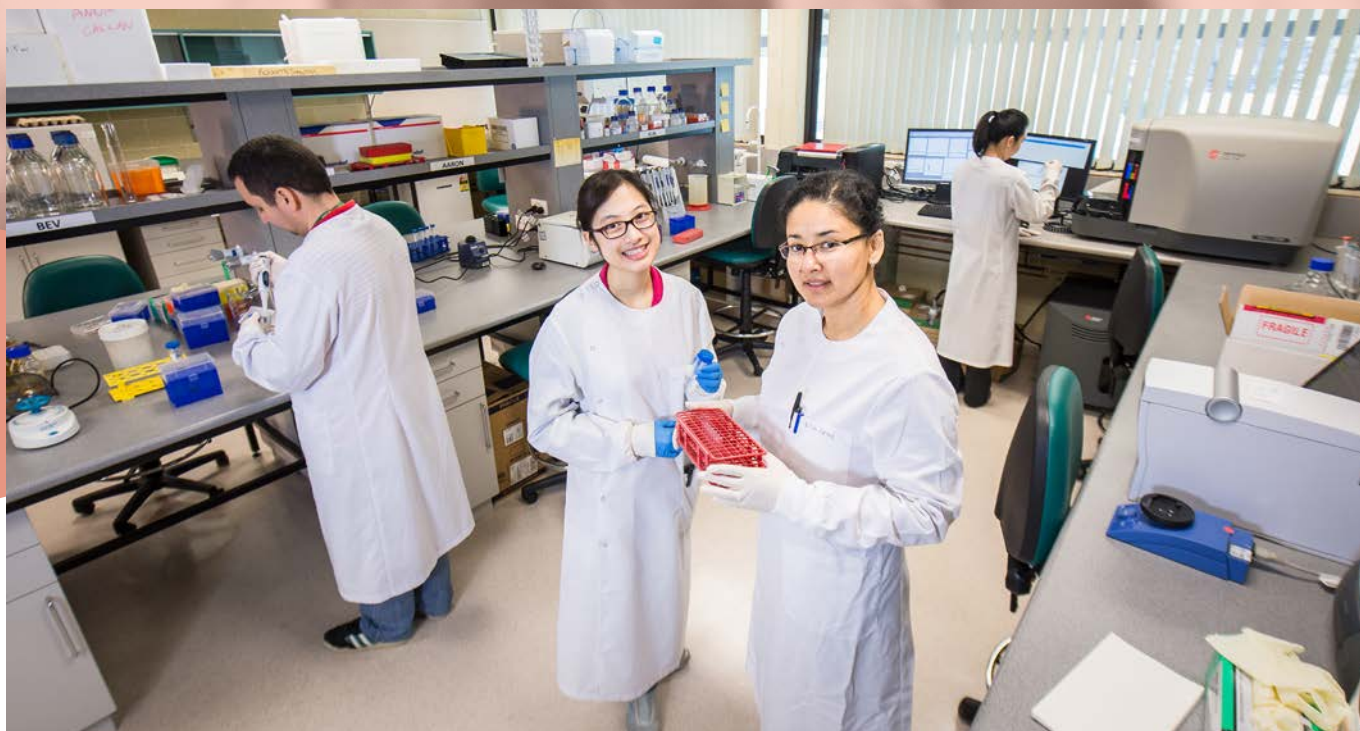
Professor Mel Ziman
Associate Dean Research
School of Medical and Health Sciences

Key Research Areas

Our areas of research strength are:

- Cancer
- Neuroscience
- Exercise and Sports Science
- Clinical Science
- Population Health
- Occupational and Environmental Health

For more information about our research areas, visit:
www.ecu.edu.au/schools/medical-and-health-sciences/research-activity



ECU Melanoma Research Group

The ECU Melanoma Research Group's primary focus is to develop blood tests to detect circulating melanoma cells, tumour DNA or other cancer biomarkers in the patient's blood early in the disease process. This will not only allow clinicians to monitor patients for disease status and recommend an appropriate course of treatment at an early stage, but also inform them earlier of drug efficacy or drug resistance, allowing a better patient prognosis.

Melanoma is one of Australia's most common cancers with over 13,000 new diagnoses per year. In one out of ten patients, the melanoma diagnosis comes too late, as the melanoma has already spread throughout the body, drastically diminishing the chances of survival. With more than 1,700 Australians dying every year from melanoma -one every 5 hours-, we urgently require a

better understanding of how the melanoma spreads and why certain tumours respond to current treatment while others are resistant to treatment.

For more information, visit: www.ecu.edu.au/schools/medical-and-health-sciences/our-research/ecu-melanoma-research-group

Research Projects

Uveal Melanoma: Bypassing an invasive eye biopsy through development of a novel blood test

Melanoma of the eye (uveal melanoma) is the most common cancer of the eye, and the leading cause of eye cancer related death. Of those diagnosed with uveal melanoma, 50% will have the cancer spread (metastasise) to other parts of the body and of those with detectable spread, 92% will die within two years. Therefore, it is important to determine which patients fall within this 50% for closer clinical follow-up and early treatment to prevent the spread of the cancer. Fortunately, those who sit within this 50% have specific genetic mutations that can be observed, enabling early intervention.

At present, the classification of uveal melanoma types is achieved by obtaining a sample from the tumour in the eye prior to radiation treatment. The procedure is risky, with complications that can totally or partially impair vision of the affected eye. In addition, in cases where the test has been deemed inconclusive, due to insufficient sample or degradation, no repeat test can be performed. Considering their risk-benefits many patients declined the test. After treatment of the primary tumour, and unknowing of the patient's specific risk, patients are monitored irregularly and clinical practices significantly vary. The test that the ECU uveal melanoma research team is developing will provide a less invasive alternative that can be performed routinely, repeatedly and rapidly in real time when treatment decisions need to be made.

Circulating Melanoma Tumour Cells

In this project, researchers aim to capture and study the cells responsible for melanoma spreading. These cells, circulating tumour cells (CTCs) are released from the tumour into the blood stream. By studying the cells and the DNA and RNA of these cells, researchers will increase their understanding of how melanoma tumours spread and why some tumours respond to treatment. Using CTCs removes the need for highly invasive tumour biopsies.

ECU's melanoma research centre has become a reference research centre for the study of CTCs in melanoma, and it is now beginning to expand the research to include breast and prostate cancers.

Identifying the patients that will or will not respond to treatment is the goal of the research project moving forward. The team have developed technologies and tools to isolate single melanoma cells from blood and are collaborating with world leaders to sequence DNA from single cells to gain an understanding of the genetic makeup of these tumour-derived cells. The research will indicate how melanoma tumours spread allowing development of further strategies aimed at inhibiting melanoma dissemination.

Blood based biomarkers: Assessing melanoma through a blood test

ECU's melanoma research team has developed blood based biomarkers for early diagnosis, prognosis and personalisation of treatment in melanoma. Through the implementation of cutting-edge technologies and next generation sequencing the team scrutinise novel biomarkers such as Circulating Tumour Cells (CTCs) and Circulating Tumour DNA (ctDNA). In addition, the program expands to the study of miRNA, exosomes and autoantibodies for improved specificity and sensitivity. The technologies are now being expanded to include prostate, breast and lung cancers.

Implementation of these novel blood based biomarker will revolutionise the diagnosis, monitoring and treatment of melanoma patients, by allowing the implementation of more regular, informative tests at increased sensitivity, with significantly reduced costs, while reducing radiation exposure.

This research is funded by the NHMRC, Cancer Council of WA, Merck, Sharp & Dohme, Cancer Research Trust, DoH WA, and the ARC.

If you are interested in applying to ECU and want to discuss a specific project proposal in the area of melanoma research, contact:

Professor Mel Ziman

Telephone: (61 8) 6304 5171

Email: m.ziman@ecu.edu.au





Centre of Excellence for Alzheimer's Disease Research and Care

The Centre of Excellence for Alzheimer's Disease Research and Care is unique in that it brings together leading researchers in different disciplines - from prominent clinical researchers to leading exercise physiologists and brain imaging experts. The Centre has also established research collaboration with the Australian Neuromuscular Research Institute (ANRI) and Sir Charles Gairdner Hospital (SCGH).

The Centre's mission is to lower the burden of Alzheimer's disease on the community and to enhance the quality of life of people affected by this devastating disease and our Vision is to see a world without Alzheimer's disease.

The aim of the Centre of Excellence for Alzheimer's Disease Research and Care is to:

- contribute to the community by developing effective strategies for the prevention of Alzheimer's disease;
- develop tests for the early diagnosis of the disease;
- develop effective treatments that delay the onset of the disease and reduce its progression; and
- make a substantial difference in the care, well-being and quality of life for people with Alzheimer's disease.

The Centre intends to achieve this objective through:

- Foundational research – aimed at achieving a molecular/cellular-level understanding of Alzheimer's disease that underpins the more applied 'translational' research in the centre, while having the potential for the discovery of therapeutic drugs.
- Translational research – aimed at clinical outcomes – building on the outputs of foundational research and producing outputs that, when translated to practice, will improve population health and health policy.
- Enabling (applied) research – aimed at facilitating translation of research into practice.

For more information, visit: www.ecu.edu.au/schools/medical-and-health-sciences/our-research/centre-of-excellence-for-alzheimers-disease-research-and-care

Research Projects

Australian imaging, biomarkers and lifestyle (AIBL2) study on ageing

AIBL is a multicentre, multidisciplinary study of Alzheimer's Disease (AD) and ageing, funded by the CSIRO's national flagship initiative, and encompasses research centres in both Western Australia and Victoria. The AIBL study is aimed at improving awareness of the causes of AD and understanding its diagnosis, in order to develop preventative strategies. Launched in November 2006, it is a prospective, longitudinal study of ageing comprising three groups of patients: those with Alzheimer's Disease (AD), Mild Cognitive Impairment (MCI) and healthy volunteers respectively. The first phase, completed in March 2010, was a 3-year longitudinal study of 1000 individuals. Phase two of the study continues for a further 3 years, and includes 3 additional follow-up assessments of phase one participants, along with an additional 500 newly recruited participants. It also includes the implementation and evaluation of a lifestyle-based intervention program for the prevention of AD.

Although Autosomal Dominant AD (ADAD) represents less than 1% of all cases of Alzheimer's Disease, it is an attractive model to study because the known biochemical consequences of the inherent genetic mutations are believed to underlie the pathological basis of the disorder. The opportunity to determine the sequence of imaging and biomarker changes in pre-symptomatic gene carriers destined to develop AD may reveal critical information about the pathological cascade that culminates in symptomatic disease. Because clinical and pathological phenotypes of dominantly inherited AD appear similar to those of the far more common late-onset "sporadic" AD, the nature and sequence of brain changes in early-onset AD may also be relevant for late-onset AD. However, there are few individuals with ADAD and they are dispersed worldwide, hence the requirement for DIAN as a systematic way to evaluate this population and use the data to develop a global patient registry.

Dominantly Inherited Alzheimer Network (DIAN) study

The Dominantly Inherited Alzheimer Network (DIAN) will study dominantly inherited Alzheimer's disease in individuals for whom the diagnosis is certain (mutation carriers) in comparison with their non-carrier siblings, who serve as naturally occurring control group. Advantages of this cohort include the collection of relevant information and specimens from presymptomatic stages through symptomatic stages and the absence of confounding age-associated illnesses that may influence the onset and course of DAT. The value of the DIAN cohort will be enhanced because it will provide a sample size larger than can be achieved by any site alone, because all DIAN participants will be assessed longitudinally with comprehensive and state of the art clinical, cognitive, genetic, imaging, and biomarker protocols, and because all data will be collected in a standard and uniform manner for entry into a central repository. This research database will be harmonized with other databases (ADNI; NACC) that use methods and protocols identical to DIAN, and will serve to promote data sharing within and without DIAN.

If you are interested in applying to ECU and want to discuss a specific project proposal, please contact:
Professor Ralph Martins AO
Foundation Chair in Aging & Alzheimer's Disease
Telephone: +61 8 6304 5456
Email: r.martins@ecu.edu.au



Huntington's Disease Research Group

The Huntington's Disease Research team within the ECU Melanoma Research Group is a multidisciplinary team whose research is centred around investigating novel environmental enrichment treatment modalities and the development of prognostic and diagnostic assessments within the Huntington's disease (HD) population.

The aims of the group are:

- To investigate the therapeutic potential of environmental enrichment treatment modalities in impacting HD progression via clinical, functional, imaging, physiological and biochemical biomarkers;
- Assess the therapeutic effectiveness of environmental enrichment in improving the quality of life for HD individuals; and
- Design simple, inexpensive, HD-sensitive biomarkers capable of assessing HD symptomatic progression.

For more information, visit: www.ecu.edu.au/schools/medical-and-health-sciences/our-research/huntington-disease-research-group

If you are interested in applying to ECU and want to discuss a specific project proposal, please contact:

Dr Travis Cruickshank

Telephone: +61 8 6304 3640

Email: t.cruickshank@ecu.edu.au

Sarich Neuroscience Research Institute

Building on extensive knowledge and experience in the Neurosciences field, Edith Cowan University (ECU) will take up residence at the newly established Ralph and Patricia Sarich Neuroscience Research Institute (Sarich Institute) at QEII Medical Centre. ECU's Professors Ralph Martins, Dylan Edwards and Mel Ziman, and Dr Travis Cruickshank will work at the institute, supported with ongoing facility provision by the Australian Alzheimer's Research Foundation and in close partnership with The Perron Institute, aiming to deliver management programs that will delay progression of all neurodegenerative diseases.



Exercise Medicine Research Institute

Edith Cowan University's Exercise Medicine Research Institute is a cross-disciplinary alliance of research centres and expertise with extensive national and international linkages. It is the first institute of its kind at an Australian University bringing together an expert team of researchers committed to improving community health and wellbeing. In partnership with national and international networks, it enhances collaboration and promotes a holistic approach to health and lifestyle.

Ongoing research will further support the community, with the Institute examining the role of exercise in:

- Improving sexual health in men with prostate cancer: randomised controlled trial of exercise and psychosexual therapies
- Preliminary efficacy of implementing a program of exercise medicine for men on prostate cancer active surveillance – A pilot study
- Intense exercise for survival among men with metastatic castrate-resistant prostate cancer (INTERVAL – MCRPC) (GAP4)
- Mechanical modulation of bone metastases in advanced prostate cancer patients: Can targeted exercise suppress sclerotic tumour progression? – A pilot study
- Can exercise suppress tumour growth in advanced prostate cancer patients with sclerotic bone metastases? A randomised, controlled study protocol examining feasibility, safety and efficacy
- Mechanical modulation of bone metastases in advanced breast cancer patients: Can targeted exercise suppress osteolytic tumour progression?
- An integrated multi-component intervention to improve the lives of men with prostate cancer in Australia (TrueNTH Lifestyle and Exercise)
- Exercise medicine for all cancer survivors: implementation and evaluation of a national intervention program
- Characterising musculoskeletal health, motor development and exercise capacity of children who have completed therapy for acute lymphoblastic leukaemia and lymphoma
- The effect of pre- and post-surgical exercise interventions on patient outcomes for prostate cancer patients undergoing prostatectomy

The Institute's work developing the Exercise and Sports Science Australia Position Statement on Exercise for Cancer Survivors has led to an increase in the number of accredited exercise physiologists trained in this clinical area, with cancer patients nationally benefiting from the research. The Institute has authored the Cancer Council of WA's Guidelines for Implementing Exercise Programs for Cancer Survivors, and has formed the basis of a 12-week exercise program offered by the Cancer Council of WA to the community. The Institute has also co-authored International Clinical Guidelines by the American College of Sports Medicine on exercise for cancer survivors.

For more information, visit: www.exercisemedicine.org.au

If you are interested in applying to ECU and want to discuss a specific project proposal, please contact:
 Exercise Medicine Research Institute
 Telephone: (61 8) 6304 3444
 Facsimile: (61 8) 6304 2499
 Joondalup Campus: Building 21, Level 2
 Email: emri@ecu.edu.au



Centre for Exercise and Sports Science Research (CESSR)

Researchers in the Centre for Exercise and Sports Science Research (CESSR) conduct high-impact scientific research and provide postgraduates with training and supervision in the area of exercise and sports science with the aim of improving our understanding of human movement. We use a multi-mode approach to studying human athletic performance which uses techniques in the fields of physiology, biomechanics, psychology, motor control and learning, neurophysiology, biochemistry, medical imaging, and others, to improve this understanding. We specifically focus on translating scientific advances into the real-world setting.

The Centre for Exercise and Sports Science Research (CESSR) was established in 2007. The Centre aims to:

- foster high quality research in exercise and sports science;
- promote and enhance the teaching of exercise and sports science at ECU;
- attract and support honours and postgraduate research students;
- establish collaborative links with other research groups and institutes;
- attract research funding from competitive grant agencies and industry; and
- contribute to exercise and sports science needs at local, national and international levels.

To meet these aims, we conduct research that is relevant to the broader community and of immediate practical impact. We positively engage with other researchers as well as schools, government organisations, health professionals, and community and elite-level sports teams.

CESSR members consist of full-time academic staff and research students of the Exercise and Sports Science discipline in the School of Medical and Health Sciences, and its adjunct members (many of whom were former full-time academic staff members). The Centre welcomes many international visitors for research and research presentation purposes, and we are proud of our strong national and international outlook. In order to drive our research agenda we run a monthly research presentation series, with additional 'special presentations' by visitors.

We encourage enquiries from students and researchers wishing to pursue research activities in our research group. We also welcome enquiries from industry seeking solutions or collaborations in relevant research areas through Research and Development.

For more information, visit: www.ecu.edu.au/schools/medical-and-health-sciences/our-research/centre-for-exercise-and-sports-science-research-cessr

Research Projects

- A Series of Studies on the Physical Factors and Lower-Body Muscle Architecture Related to Aerial Performance in Surfing
- Acute and Chronic Physiological Effects of Interval Eccentric Cycling
- Assessment of changes in adolescent neuromotor fitness and bone strength
- Assessment of Competitive Requirements, Fitness and Trainability of Anaerobic and Aerobic Capacity of Surfers
- Bone Strength, Load Tolerance and Injury Risk in Elite Australian Football
- Characteristics and Determinants of Aerial Surfing
- Comparison of Physiological and Biomechanical Characteristics between Full Time, University Students and Professional Ballet Dancers
- Developing Sporting Expertise in Elite Junior Soccer Players
- Effect of an NMES/Vibration Driven Muscle Strength Training Investigation on Muscle Force, Physical Function and Health, and Quality of Life in People with Spinal Cord Injury
- Effect of Exercise Intensity and Cognitive Demand on Acute Changes in Vigilance and Attention
- Effects of Bilateral and Unilateral Resistance Training on Athletic Performance
- Effects of Instructions on Attentional Focus and Subsequent Sprint Speed, Muscle Activation, Kinetics, Kinematics and RPE
- Effects of Rapid Weight Loss on Physiology and Performance in Mixed Martial Arts Athletes
- Examination of Physiological Factors Influencing High Performance Sprint Cycling
- Influence of a Simulated Olympic Distance Cycle on Subsequent Running Biomechanics and Running Economy in Triathletes
- Influence of Muscle Strength and Its Changes with Heavy Eccentric Strength Training on Performance in High-Level Sprint Kayakers
- Injury Mechanisms and Predictive Measures in Surfing Manoeuvres
- Iron Regulation at Altitude: An Investigation into the Influence of Acute Exposure, Chronic Responses, and Best Practice Supplementation
- Manifestations of Fatigue in Boxing: Investigating the Role of Soft-Tissue Vibration
- Mechanical, Hormonal, and Anabolic Effects of Hypertrophy-Oriented Cluster Sets
- Muscle Damage and Adaptation in Natural Male Competitive Bodybuilders
- Neuromuscular Profile of Change of Direction and Agility Performances
- Reducing Biomechanical Risk Factors Associated with Injury during Landing in Pre-Elite Youth Netballers
- Reliability of peripheral Quantitative Computed Tomography (pQCT), reliability of Osteogenic Index, and a thirty-six week upper body resistance training strength study measuring osteogenic adaptations
- Responses of the Cortico-spino-motorneural Pathway to Acute Passive Muscle Stretching, and their Contribution to Stretch-Induced Force Loss
- The Effect of Periodised Resistance Training on Physical Function and Health Outcomes in Older Adults
- The Effects of Velocity-Based Training on Neuromuscular Fatigue, Strength and Power
- The Evaluation and Training of Sensorimotor Abilities in Competitive Surfers
- The Mechanics of Front Leg Loading During Cricket Fast Bowling: Delivery Variations, Spell Demands, and the Effect of Strength Training
- The Physiological Effect of Resveratrol Ingestion on Multi-Stage Cycling Performance
- Training Load Quantification in Elite Australian Basketball and the Use of the Reactive Strength Index as a Valid Performance Measure
- Use of Inertial Sensors to Quantify Segment Loading during Running and Jumping: Comparison of Youth and Adults

If you are interested in applying to ECU and want to discuss a specific project proposal in water resources and environmental engineering, contact:
Professor Anthony Blazeovich
Director
Telephone: (61 8) 6304 5472
Email: a.blazevich@ecu.edu.au



Communication Disorders Research Group

Communication Disorders Research at ECU focuses on clinically relevant and translatable investigations related to communication disorders across the lifespan.

Communication is central to our everyday activities. Talking, texting, emailing, reading, listening and understanding are all vital parts of communicating in the 21st century, and they all fulfil different functions – to convince, to argue, to explain, to collaborate, to request, to complain, to defend, to organise, to socialise, as well as to maintain our relationships with family, friends, and work colleagues. When communication ability is restricted through either developmental factors or acquired after a brain injury such as a stroke, an individual's skills, relationships and identity can all be affected.

The Communication Disorders Research Group's primary areas of research are early aphasia intervention following stroke and Aboriginal Australians' experiences of brain impairment and rehabilitation after stroke and traumatic brain injury, with significant research also being undertaken in the areas of autism, early speech and language development, fluency disorders, and teaching and learning strategies within allied health curricula.

The research team is a group of active researchers with national and international reputations in the field of communication disorders related to brain injury. The group leads projects supported through the National Health & Medical Research Council (NHMRC) and other multiple funding bodies. Strong national and international collaborations underpin all endeavours. Our research networks are academic, government-related, and clinical in nature, with world class collaborators. We are ensuring that we address current clinically relevant issues, with knowledge translation as a key focus. We achieve this within current policy contexts and maintain our research at the forefront of our industry.

For more information, visit: www.ecu.edu.au/schools/medical-and-health-sciences/our-research/communications-disorders-research-group

Research Projects

Neuro-Rehabilitation

- VERSE (Very Early Rehabilitation in SpEEch: An RCT of aphasia therapy after stroke): an international NHMRC funded study which promotes a “use it” or “lose it” approach to brain recovery and aims to show that very early aphasia therapy is beneficial and cost effective.
- Treatment fidelity in stroke rehabilitation is an essential component in demonstrating treatment efficacy. This research focuses on using internationally recognised criteria (e.g. TiDIER Statement) to establish if a treatment in a study was provided as per the study protocol.
- Investigating Communication Enhanced Environments after stroke – this translation focused research is investigating ways to engage staff and healthcare systems to improve interaction environments in early stroke recovery.
- Communicative interactions in acute and sub-acute care settings have shown to be a powerful influence on communication success in early stroke recovery. This research looks at how to improve everyday communication to better engage and motivate stroke survivors in early recovery.

Brain injury in Aboriginal populations

- Enhancing Rehabilitation Services for Aboriginal Australians After Brain Injury: a stepped wedge cluster randomised control trial funded by the NHMRC to improve quality of life health outcomes for Aboriginal people after stroke and traumatic brain injury.
- The Wangi (talking) project: a feasibility study for the rehabilitation of Aboriginal people post stroke supported by the Stroke Foundation.
- Missing Voices: Communication difficulties after stroke and traumatic brain injury in Aboriginal Australians: The first study (NHMRC funded) to explore the extent and impact of acquired communication disorders following brain injury in urban and rural Aboriginal Australians.

Clinical Education

- The development of professional identity in undergraduate speech pathology students: a study using interviews, questionnaires and analysis of both ePortfolios and the course structure to identify factors that support professional identity development.

Developmental communication disorders

- Evidence based practice in the treatment of adults who stutter: analysis of a systematic review and interviews with people who stutter. This project utilises an integrative approach to investigate what works in therapy and what the factors are for successful management of stuttering.
- Randomised controlled trial of fish oil supplementation for children with autism spectrum disorder: A pilot study exploring the effects of high-dose fish oil taken for 6 months by young children (aged 2-6 years) who have diagnosed autism.
- Effects of prematurity and intubation on voice disorders for children of school age: evaluation of voice outcomes at school age of children who were born preterm and who experienced endotracheal intubation to support their respiration as a neonate.



If you are interested in applying to ECU and want to discuss a specific project proposal, contact:
Professor Beth Armstrong
Telephone: (61 8) 6304 2769
Email: b.armstrong@ecu.edu.au



Systems and Intervention Research Centre for Health (SIRCH)

The Systems and Intervention Research Centre for Health (SIRCH) brings together scientists and clinicians to promote better health, improve early disease detection and enhance intervention using appropriate workforce education and systems. SIRCH develops and tests approaches that aim to improve equity, access, safety and quality in healthcare. SIRCH is a trans-disciplinary research group committed to inter-professional learning.

The objectives of the Centre are:

- to facilitate the translation of research and policy to enhance healthcare practice;
- to increase pure and applied research outputs from the diverse range of researchers in the Centre;
- to improve the quality and sustainability of the workforce;
- and apply innovative education initiatives.

The Centre's activities cover four broad domains;

- Personalised Health including health promotion, health intervention, environmental health, global health and public health genomics;
- Applied Health and Safety including safety and quality in health, communication in healthcare and testing new models of service delivery;
- Aboriginal and Community Health including working with community on developing and evaluating innovative models of care, and challenging attitudes of healthcare providers;
- SIRCH Teaching and Learning which examines all facets of teaching and learning related to the research domains.

The Centre focuses on the following research areas:

- Clinical Science
 - Nutrition and Dietetics Research
 - Occupational Therapy Research
 - Emergency Services Research
- Population Health
 - Glycomics and Suboptimal Health Research
 - Occupational Health Research
 - Environmental Health Research
 - Clostridium Difficile
 - Grandparent Research
 - Health Promotion

For more information, visit: www.ecu.edu.au/schools/medical-and-health-sciences/our-research/systems-and-intervention-research-centre-for-health

If you are interested in applying to ECU and want to discuss a specific project proposal, contact:
Associate Professor Peter Roberts
Director
Telephone: (61 8) 6304 5155
Email: p.roberts@ecu.edu.au

Occupational Health Research Group

Being located in the School of Medical and Health Sciences provides an opportunity for the group of certified occupational hygienists to collaborate in areas of biomarker research and the integration of health surveillance and exposure data.

Within the Occupational Health Research Group there is a specialism concerning the prevention of workplace injuries, incidents and exposure. This research group aims to:

- Develop innovative processes to assist organisations of all sizes and types to manage and evaluate injury risk to an acceptable level
- Assist organisations to develop injury prevention strategies
- Develop research protocols for the accurate determination of worker exposure profiles
- Integrate environmental (exposure) and medical surveillance data
- Develop laboratory based protocols to validate Australian occupational exposure standards

For more information, visit: www.ecu.edu.au/schools/medical-and-health-sciences/our-research/systems-and-intervention-research-centre-for-health/occupational-health-research-group



Environmental Health Research Group

The environmental health team have established close relationships with the Western Australian Department of Health, Medical Entomology division and collaborate with local and state government in various mosquito related projects. ECU currently host the Local Health Authorities Analytical Committee (LHAAC) and are involved in a number of projects related to food safety.

The environmental health research themes are centred on:

- Mosquito vector management
- Climate change and heat exposures of outdoor workers in developing countries and heat wave impacts and policy related to older people
- Bush fires and heavy metal contamination
- Food safety
- Water misting system and bacteriological risks

For more information, visit: www.ecu.edu.au/schools/medical-and-health-sciences/our-research/systems-and-intervention-research-centre-for-health/environmental-health-research-group

If you are interested in applying to ECU and want to discuss a specific project in occupational health or environmental health, contact:
Associate Professor Jacques Oosthuizen
Telephone: (61 8) 6304 5876
Email: j.oosthuizen@ecu.edu.au

Grandparent Research Group

Recent research by the Grandparent Research Team located within the School of Medical and Health Sciences has identified critical issues around the physical health and mental well-being of grandparents, parents and children who are impacted by trauma (eg addiction, domestic violence, child maltreatment and social isolation). The research team has demonstrated that the longer term impact of such experiences on children can lead to poor scholastic performance, acts of anti-sociality, substance abuse and criminality.

The aims of this research group are:

- To support grandparents, grandchildren and their parents affected by trauma in successful reunification.
- To make evidence based recommendations to government and non-government key stakeholders and advocate for the implementation of viable intervention strategies and legislative changes.
- To evaluate the cost effectiveness and continuous improvement derived from recommended interventions and report findings to government and industry.

For more information, visit: www.ecu.edu.au/schools/medical-and-health-sciences/our-research/systems-and-intervention-research-centre-for-health/grandparent-research-group

If you are interested in applying to ECU and want to discuss a specific project, contact:

Dr David Coall

Telephone: (61 8) 6304 5171

Email: d.coall@ecu.edu.au

Nutrition and Dietetics Research Group

Nutrition & Dietetics Research Team at ECU translate nutritional research into practice with a view to improve health outcomes for all Australians. Food and nutrition as medicine can optimise health, reduce the risk of chronic disease and improve development and performance.

The team has several research pillars:

- Nutrition Education and Food Literacy;
- Gut Health;
- Chronic Disease and Clinical Nutrition;
- Food Security;
- Life Course Nutrition.

The team has a number of ongoing research projects, including:

- **Refresh.ED: An Online food and nutrition teaching resource for WA school children**

Nutrition is a single area in a crowded health curriculum taught in Australian schools and teachers may not have the necessary skill set or time to learn contemporary nutrition science to teach to students. As a response to this challenge, ECU has developed Refresh.ED, which is an online nutrition teaching resource for school children in Western Australia.

- **SNACPlus: Online Program to Build Knowledge and Confidence to Improves Healthy Eating Environments in the Childcare Sector**

The SNACPlus research group has developed an engaging and relevant online curriculum to provide childcare staff with professional development and resources to teach healthy eating to two to five year old children and build a healthy food environment in their centre. Resources are accessible by parents/carers and are available on the SNACPlus website free of charge.

- **Examining the long term health impacts of the Paleolithic diet and the effects on gut health**

This project is aimed at determining how total long-term dietary patterns, inclusive and exclusive of grains and legumes, contribute to changes in gut health that impact the risk of non-communicable chronic diseases.

- **The Milky Way Study**

This study will compare the impact of regular fat and reduced fat dairy products across three main health outcomes including obesity, gut health and cardiovascular health. If the results of the research are promising, the team will look at replicating the study on a much larger scale, to provide good quality evidence for future dietary guidelines.

For more information, visit: www.ecu.edu.au/schools/medical-and-health-sciences/our-research/systems-and-intervention-research-centre-for-health/nutrition-and-dietetics-research-group

If you are interested in applying to ECU and want to discuss a specific project, contact:

Professor Amanda Devine

Telephone: (61 8) 6304 5527

Email: a.devine@ecu.edu.au



Emergency Services Research Group

The Emergency Service Research Group is ideally placed within the School of Medical and Health Sciences. Most emergencies require an interdisciplinary response and this is reflected by the interdisciplinary nature of the School. We have research collaborations with state wide, national and international organisations including the Royal Flying Doctor Service, Falck, the West Australian Department of Fire and Emergency Services and the West Australian Department of Mines and Petroleum.

The Emergency Services Research Group is a trans-disciplinary research group with focus on five broad themes.

- Paramedicine
- Emergency response
- Aeromedical retrieval
- Search and rescue
- Fire

If you are interested in applying to ECU and want to discuss a specific project proposal in Emergency Services, contact:

Professor Russell Jones

Telephone: (61 8) 6304 2043

Email: russell.jones@ecu.edu.au



ECU Health Simulation Centre

The ECU Health Simulation Centre is a high fidelity simulation centre with a strong focus on human factors, leadership, followership, communication and clinical competence. The Centre is adept at bringing together researchers and clinicians to optimise patient healthcare outcomes and to search for solutions to contemporary issues and problems confronting health practices.

The Centre offers research and training relevant to:

- Anaesthesia
- Critical care paramedicine
- Community paramedicine
- Emergency medicine
- Intensive care
- Nutrition and dietetics
- Occupational health
- Speech pathology
- Undergraduate paramedicine

The ECU Health Simulation Centre is a trans-disciplinary research group with focus on four broad themes:

- Optimising interprofessional practice
- The use of simulation to enhance professional preparation
- Establishing fitness to practice guidelines
- Identification and elimination of errors

For more information, visit: [www.ecu.edu.au/
community-engagement/health-advancement/ecu-
health-simulation-centre](http://www.ecu.edu.au/community-engagement/health-advancement/ecu-health-simulation-centre)



If you are interested in applying to ECU and want to discuss a specific project proposal in Health Simulation, contact:

Professor Russell Jones
Telephone: (61 8) 6304 2043
Email: russell.jones@ecu.edu.au

Our Researchers

Professor Moira Sim

Executive Dean

MBBS, GradDipAD

Professor Moira Sim is a general practitioner and a specialist addiction medicine physician with over 30 years in clinical practice in the community and has been at ECU since 2004. Moira has worked to increase access to quality care through professional education, advocacy and the establishment of system change through many roles in the healthcare system.

Moira holds a Clinical Adjunct position at the School of Psychiatry and Clinical Neurosciences at the University of Western Australia, and is a member of the Impairment Review Committee at the Nurses and Midwives Board and a panellist on the Impairment Review Committee and Professional Standards Committee for the Medical Board for the Australian Health Practitioner Regulation Agency. She is part of the education team for Medical Defence Australia National. Moira has served as Medical Director to Silver Chain's Home Hospital, and as a member of the Medical Defence Association President's Medical Liaison Council, the Western Australian Council for Safety and Quality in Health Care, the Musculoskeletal Network Executive Advisory Group, the Psychotherapeutic Drugs Committee of the Western Australian Therapeutics Advisory Group and the Care and Strategic Services Advisory Group at Amana Living.

Recent Publications

Book Chapters

- Sim, M., Khong, E., Hulse, G., (2014), Motivational interviewing. Handbook of behavioural medicine, 2(47), 406-428, West Sussex.

Journal Articles

- Almeida, O., Marsh, K., Flicker, L., Hickey, M., Sim, M., Ford, A., (2016), Depressive symptoms in midlife: the role of reproductive stage. Menopause: The Journal of the North American Menopause Society, 23(6), 1-7, Philadelphia, USA, DOI: 10.1097/GME.0000000000000598.
- Allegri, M., De Gregori, M., Minella, C., Klersy, C., Wang, W., Sim, M., Gieger, C., Manz, J., Pemberton, I., Macdougall, J., Williams, F., Van Zundert, J., Buyse, K., Lauc, G., Gudelj, I., Primorac, D., Skelin, A., Aulchenko, Y., Karssen, L., Kapural, L., Rauck, R., Fanelli, G., (2016), `Omics? biomarkers associated with chronic low back pain: protocol of a retrospective longitudinal study. BMJ Open, 6(10), article no.e012070, DOI: 10.1136/bmjopen-2016-012070.
- Wain, T., Sim, M., Bessarab, D., Mak, D., Hayward, C., Rudd, C., (2016), Engaging Australian Aboriginal narratives to challenge attitudes and create empathy in health care: a methodological perspective. BMC Medical Education, 16(1), Article no. 156, DOI: 10.1186/s12909-016-0677-2.
- Liira, H., Knight, AP., Sim, M., Wilcox, HM., Cheetham, S., Aalto, MT., (2016), Workplace interventions for preventing job loss and other work related outcomes in workers with alcohol misuse. Cochrane Database of Systematic Reviews, 2016(9), Article no. CD012344, DOI: 10.1002/14651858.CD012344.



Contact:

Email: m.sim@ecu.edu.au

Telephone: (61 8) 6304 3678

Research Interests:

- Translation of evidence to clinical practice
- Alcohol and other drugs
- Prevention in health
- Managing behaviour in clinical practice

Professor Mel Ziman

Associate Dean Research
PhD, BSc (Hons)

Professor Mel Ziman's research interests are aimed at increasing our understanding of genes and the environment. Of particular interest is the delineation of the importance of the environment on developmental genes and the impact on cell proliferation, specification and migration in malignant cells and in neurogenesis.

Professor Ziman has won highly competitive national research grants from the National Health and Medical Research Council and the Australian Research Council. Recent grants of over \$2 million dollars focus on serological biomarkers in melanoma research. Professor Ziman has formed a number of successful partnerships and collaborates closely with local, national and international scientists, clinicians and biotechnology companies.

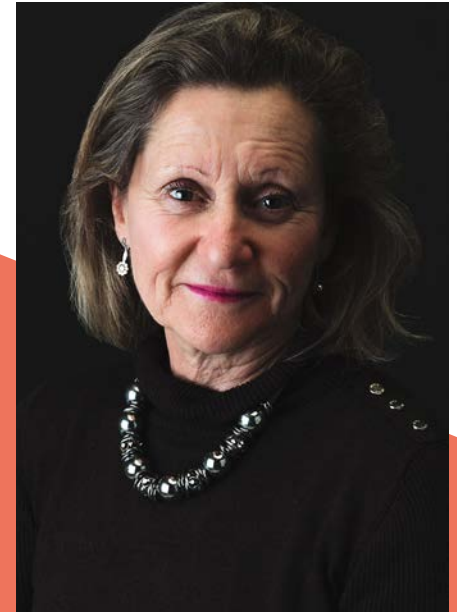
Recent Publications

Book Chapters

- Freeman, J., Gray, E., Ziman, M., (2015), Circulating Tumor Cells as Biomarkers in Cancer. *Biomarkers in Cancer*, 31-51, London, UK, DOI: 10.1007/978-94-007-7681-4_21.
- Ziman, M., Millward, M., Pearce, R., Lee, M., (2012), Serological Biomarkers in Melanoma. *Diagnostic and Prognostic Biomarkers and Therapeutic Targets in Melanoma*, 195-208, USA, DOI: 10.1007/978-1-60761-433-3_15.

Journal Articles

- Phan, T., Carter, O., Adams, C., Waterer, G., Chung, L., Hawkins, M., Rudd, C., Ziman, M., Strobel, N., (2016), Discriminant validity of the Hospital Anxiety and Depression Scale, Beck Depression Inventory (II) and Beck Anxiety Inventory to confirmed clinical diagnosis of depression and anxiety in patients with chronic obstructive pulmonary disease. *Chronic Respiratory Disease*, 13(3), 220-228, London, UK, DOI: 10.1177/1479972316634604.
- Zaenker, P., Gray, E., Ziman, M., (2016), Autoantibody Production in Cancer? The Humoral Immune Response toward Autologous Antigens in Cancer Patients. *Autoimmunity Reviews*, 15(5), 477-483, DOI: 10.1016/j.autrev.2016.01.017.
- Calapre, L., Gray, E., Kurdykowski, S., David, A., Hart, P., Descargues, P., Ziman, M., (2016), Heat-mediated reduction of apoptosis in UVB-damaged keratinocytes in vitro and in human skin ex vivo. *BMC Dermatology*, 16(1), Article no. 6, London, UK, DOI: 10.1186/s12895-016-0043-4.
- Bartlett, D., Cruickshank, T., Hannan, A., Eastwood, P., Lazar, A., Ziman, M., (2016), Neuroendocrine and neurotrophic signaling in Huntington's Disease: Implications for pathogenic mechanisms and treatment strategies. *Neuroscience and Biobehavioral Reviews*, 71(2016), 444-454, DOI: 10.1016/j.neubiorev.2016.09.006.
- Gray, E., Rizos, H., Reid, A., Boyd, S., Pereira, M., Lo, J., Tembe, V., Freeman, J., Lee, J., Scolyer, R., Siew, K., Lomma, C., Cooper, A., Khattak, M., Meniawy, T., Long, G., Carlino, M., Millward, M., Ziman, M., (2015), Circulating tumor DNA to monitor treatment response and detect acquired resistance in patients with metastatic melanoma. *Oncotarget*, 6(39), 42008-42018, New York, USA, DOI: 10.18632/oncotarget.5788.



Contact:

Email: m.ziman@ecu.edu.au
Telephone: (61 8) 6304 3640

Research Interests:

- The role of developmental genes in the proliferation, differentiation and migration of cells in the embryo and in disease processes such as cancer including Cutaneous Malignant Melanoma and neurodegenerative diseases including Huntington's disease.
- Characterisation of circulating cells in Melanoma
- Multidisciplinary therapy and neurogenesis in Huntington's disease.

Professor Robert U Newton

Associate Dean Medical & Exercise Sciences; Co-Director (EMRI)

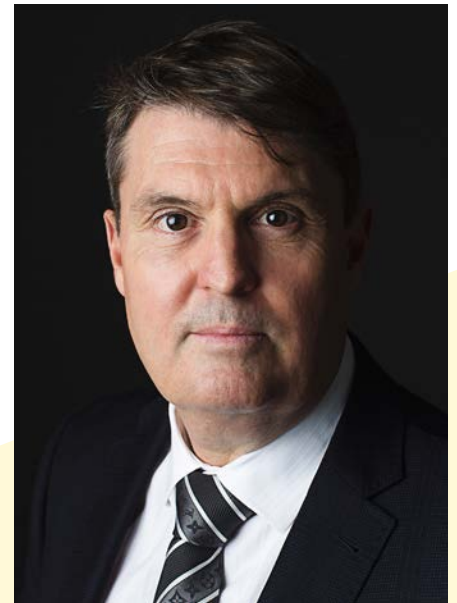
PhD, MHMS, BSc(Hons)

Professor Rob Newton is an Accredited Exercise Physiologist, Certified Strength and Conditioning Specialist with Distinction with the NSCA, Fellow of Exercise and Sports Science Australia and Fellow of the National Strength and Conditioning Association (NSCA). He has over 30 years of academic and professional experience in exercise and sports science and has been at ECU since 2003. Prior to appointment at ECU, Rob was Director of the Biomechanics Laboratory, at Ball State University in Indiana. He has also worked at the Pennsylvania State University as a visiting research fellow in the Center for Sports Medicine. Rob also holds an Adjunct Professorship at the University of Queensland and an Honorary Professorship at the University of Hong Kong. In 2004 he was awarded Outstanding Sports Scientist of the Year by the NSCA. He has published over 290 refereed scientific journal articles, two books, 16 book chapters and has a current h-Index of 59 with his work being cited over 12,500 times. As of 2016 his research had attracted over \$29 Million in competitive research funding.

Recent Publications

Journal Articles

- Hyde, MK., Newton, R., Galvao, D., Gardiner, R., Occhipinti, S., Lowe, A., Wittert, GA., Chambers, S., (2016), Men's help-seeking in the first year after diagnosis of localised prostate cancer. *European Journal of Cancer Care*, Article in press(Article in press), 12p., DOI: 10.1111/ecc.12497.
- Coyne, J., Tran, T., Secomb, J., Lundgren, L., Farley, O., Newton, R., Sheppard, J., (2016), Maximal strength training improves surfboard sprint and endurance paddling performance in competitive and recreational surfers. *Journal of Strength and Conditioning Research*, ahead of print(ahead of print), 1-6, United States, DOI: 10.1519/JSC.0000000000001483.
- Coyne, J., Tran, T., Secomb, J., Lundgren, L., Farley, O., Newton, R., Sheppard, J., (2016), Association between anthropometry, upper extremity strength, and sprint and endurance paddling performance in competitive and recreational surfers. *International Journal of Sports Science and Coaching*, Article in press(Article in press), 1-8, London, UK, DOI: 10.1177/1747954116667111.
- Gonzalez-Mohino, F., Gonzalez-Rave, J., Juarez, D., Fernandez, F., Castellanos, R., Newton, R., (2016), Effects of continuous and interval training on running economy, maximal aerobic speed and gait kinematics in recreational runners. *Journal of Strength and Conditioning Research*, 30(4), 1059-1066, United States, DOI: 10.1519/JSC.0000000000001174.
- Teo, S., Newton, M., Newton, R., Dempsey, A., Fairchild, T., (2016), Comparing the effectiveness of a short-term vertical jump vs. weightlifting program on athletic power development. *Journal of Strength and Conditioning Research*, 30(10), 2741-2748, United States.
- Kuusmaa, M., Schumann, M., Sedliak, M., Kraemer, W., Newton, R., Malinen, J., Nyman, K., Hakkinen, A., Hakkinen, K., (2016), Effects of morning versus evening combined strength and endurance training on physical performance, muscle hypertrophy, and serum hormone concentrations. *Applied Physiology, Nutrition and Metabolism*, 41(12), 1285-1294, DOI: 10.1139/apnm-2016-0271.
- Conlon, J., Newton, R., Tufano, J., Banyard, H., Hopper, A., Ridge, A., Haff, G., (2016), Periodization strategies in older adults: Impact on physical function and health. *Medicine and Science in Sports and Exercise*, 48(12), 2426-2436, DOI: 10.1249/MSS.0000000000001053.



Contact:

Email: r.netwon@ecu.edu.au

Telephone: (61 8) 6304 3443

Research Interests:

- Effects and mechanisms of exercise as medicine for reducing decline in strength, body composition and functional ability in cancer patients
- Cancer related fatigue, progression free and overall survival.

Professor Anthony Blazeovich

**Director, Centre for Exercise and Sports Science Research (CESSR)
PhD, BSc (Hons)**

Tony is a Professor of Biomechanics in the School of Medical and Health Sciences, and the Director of the Centre for Exercise and Sports Science Research (CESSR). His research aims to determine: (1) the relative influence of musculo-tendinous and neural factors on human movement performance; and (2) the adaptive responses of these factors to exercise training and detraining. His research (and teaching) foci therefore mandate the understanding and use of a broad range of techniques in the areas of biomechanics, neurophysiology and strength & conditioning. Professor Blazeovich has published over 100 scientific papers, been invited to speak over 60 times at international scientific conferences and to industry, has attracted over AU\$1.5 million in research funding, and is the author of the textbook 'Sports Biomechanics: The Basics' (Bloomsbury Publishers). He is a Fellow of the European College of Sports Sciences, and member of Exercise and Sports Sciences Australia, International Society of Biomechanics, International Society of Sports Biomechanics, Australian Strength & Conditioning Association, and other organisations. Professor Blazeovich has worked in strength & conditioning with athletes at all levels, from development programs to Olympic Gold medallists, and currently works as a consultant at both domestic and international levels in Australia and Europe.

Recent Publications

Journal Articles

- Walker, S., Blazeovich, T., Haff, G., Tufano, J., Newton, R., Hakkien, K., (2016), Greater strength gains after training with accentuated eccentric than traditional isoinertial loads in already strength-trained men. *Frontiers in Physiology*, 7(2016), Article no. 149, DOI: 10.3389/fphys.2016.00149.
- Trezise, J., Collier, N., Blazeovich, T., (2016), Anatomical and neuromuscular variables strongly predict maximum knee extension torque in healthy men. *European Journal of Applied Physiology*, 116(6), 1159-1177, Germany, DOI: 10.1007/s00421-016-3352-8.
- Maffiuletti, N., Aagaard, P., Blazeovich, T., Folland, J., Tillin, N., Duchateau, J., (2016), Rate of force development: physiological and methodological considerations. *European Journal of Applied Physiology*, 116(6), 1091-1116, Germany, DOI: 10.1007/s00421-016-3346-6.
- Kay, A., Dods, S., Blazeovich, T., (2016), Acute effects of contract?relax (CR) stretch versus a modified CR technique. *European Journal of Applied Physiology*, 116(3), 611-621, Germany, DOI: 10.1007/s00421-015-3320-8.
- Earp, J., Newton, R., Cormie, P., Blazeovich, T., (2016), Faster movement speed results in greater tendon strain during the loaded squat exercise. *Frontiers in Physiology*, 7(2016), Article no. 366, Lausanne, Switzerland, DOI: 10.3389/fphys.2016.00366.
- Seitz, L., Trajano, G., Haff, G., Dumke, C., Tufano, J., Blazeovich, T., (2016), Relationships between maximal strength, muscle size, and myosin heavy chain isoform composition and voluntary postactivation potentiation. *Applied Physiology, Nutrition and Metabolism*, 41(5), 491-497, DOI: 10.1139/apnm-2015-0403.
- Kay, A., Richmond, D., Talbot, C., Mina, M., Baross, A., Blazeovich, T., (2016), Stretching of active muscle elicits chronic changes in multiple strain risk factors. *Medicine and Science in Sports and Exercise*, 48(7), 1388-1396, DOI: 10.1249/MSS.0000000000000887.



Contact:

Email: a.blazeovich@ecu.edu.au
Telephone: (61 8) 6304 5655

Research Interests:

- Biomechanics
- Neurophysiology
- Strength & Conditioning (speed, power, strength, flexibility, fatigue)

Professor Wei Wang

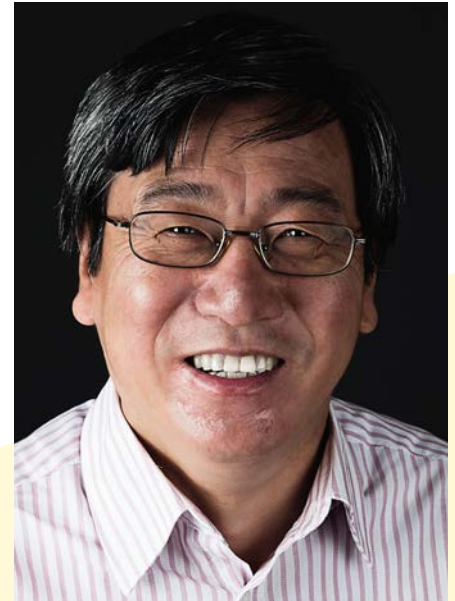
PhD, MD, FFPH, FRSB

Professor Wei Wang is a Fellow of the Faculty of Public Health established by Britain's Royal College of Physicians and a Fellow of Royal Society of Biology, United Kingdom. He has had an interest in forensic medicine for almost 30 years. In addition to his role as professor in the School of Medical and Health Sciences, Professor Wang is also the Director of the Beijing Municipal Key Laboratory-Centre of Excellence on Clinical Epidemiology, Beijing Municipal Government, China. His contributions to medical science include service as an executive member of the International Society of Translational Medicine, Membership of the Standing Committee of the International Association of Physiological Anthropology, Membership of the Expert Panel advising the WHO on its 'Grand Challenges in Genomics for Public Health in Developing Countries', Professor Wang's principal interests are in human genetics and public health, where he is a specialist in medical genetics, genetic epidemiology, population health, inbreeding studies and paternity testing.

Recent Publications

Journal Articles

- Wang YX, Adua E, Russell A, Roberts P, Ge S, Zeng Q, and Wang W (2016) Glycomics and its application potential in precision medicine. *Science* 2016; doi.org/10.1126/science.354.6319.1601-b.
- Wang YX, Klarić L, Yu XW, Thaqi K, Dong J, Novokmet M, Wilson J, Polasek O, Liu YX, Kris̃tić J, Ge SQ, BS, Puc̃ić -Bakovic M, Wu LJ, Zhou Y, Ugrina I, Song MS, Zhang J, Guo XH, Zeng Q, Rudan I, Campbell H, PhD, Aulchenko Y, Lauc G, and Wang W. (2016) The Association Between Glycosylation of Immunoglobulin G and Hypertension A Multiple Ethnic Cross-Sectional Study. *Medicine* 95 (17) doi: 10.1097/MD.0000000000003379
- Sebastian A, Alzain MA, Asweto C, Song H, Cui L, Yu X, Ge S, Dong H, Rao P, Wang H, Fang H, Gao Q, Zhang J, He D, Guo X, Song M, Wang Y, and Wang W. (2016) Glycan Biomarkers for Rheumatoid Arthritis and Its Remission Status in Han Chinese Patients. *OMICS: A Journal of Integrative Biology*. 2016, 20(6): 343-351. doi:10.1089/omi.2016.0050.
- Yan W, Li R, Dou J, Wang H, Wang B, Ma Q, Zhou Y, Song M, Yu X, Wang H, Yang X, Liu F, Mohammed A, Yan Y, Zhang L, Wu L, Zhao F, He Y, Guo X, Chen F, Xu, W, Garcia M, Menon D, Wang Y, Mu Y and Wang W (2016) Screening for potential serum-based proteomic biomarkers for human type 2 diabetes mellitus using MALDI-TOF MS. *Proteomics Clinical Application*, DOI 10.1002/prca.201600079
- Wang Y, Ge S, Yan Y, Wang A, Zhao Z, Yu, Qiu J, Mohame A, Wang H, Fang H, Gao Q, Song M, Zhang J, Zhou Y and Wang W (2016) China suboptimal health cohort study: rationale, design and baseline characteristics. *Journal of Translational Medicine* (2016) 14:291 DOI 10.1186/s12967-016-1046-y
- Yan Y., Dong J., Liu Y., Zhang J., Song M., He Y, Wang W. (2016), Association of suboptimal health status with psychosocial stress, plasma cortisol and mRNA expression of glucocorticoid receptor α/b in lymphocyte. *Stress*, 18(1), 29-34, DOI: 10.3109/10253890.2014.999233.
- Vuc̃ković F, Kristić Gudel JK, Teruel M, Keser T, Pezer M, Puc̃ić -Baković M, Stambuk J, Trbojević -Akmac̃ić I, Barrios C, Pavić T, Menni C, Wang Y, Zhou Y, Cui L, Song H, Zeng Q, Guo X, Bernardo A. Pons-Estel, Paul McKeigue, Alan Leslie Patrick, Olga Gornik, Tim D. Spector, Miroslav Harjac̃ek, Alarcon-Riquelme M, Molokhia M, Wang W, and Lauc G (2016) Association of Systemic Lupus Erythematosus With Decreased Immunosuppressive Potential of the IgG Glycome. *Arthritis & Rheumatology* 67 (11), 2978–89. DOI 10.1002/art.39273\



Contact:

Email: wei.wang@ecu.edu.au

Telephone: (61 8) 6304 3717

Research Interests:

- Public Health and Genomics
- Epidemiology
- Global burden of disease
- Clinical Genetics

Professor Ken Kazunori Nosaka

Director, Exercise & Sports Science

PhD

Professor Ken Nosaka worked in Japan for nearly 20 years before relocating to Edith Cowan University (ECU) in April 2004. He was promoted to Professor in December 2009. Over the past 9 years, he has been a research and administrative academic, and his main responsibilities within the School of Exercise and Health Sciences are to coordinate postgraduate and Honours programs, direct the Center for Exercise and Sports Science Research (2007-2012), and supervise postgraduate and Honours students. He has supervised 16 PhD (15 of them at ECU), 14 Masters by Research (11 of them at ECU) and 1 Honours (ECU) students to completion, and currently supervising 7 PhD and 4 Masters by Research students. He received the Vice Chancellor's Award "Excellence in Research Supervision" in 2008, and the Vice Chancellor's Award "Excellence in Research" in 2012.

Recent Publications

Journal Articles

- Ando, R., Nosaka, K., Inami, T., Tomita, A., Watanabe, K., Blazevich, T., Akima, H., (2016), Difference in fascicle behaviors between superficial and deep quadriceps muscles during isometric contractions. *Muscle and Nerve*, 53(5), 797-802, Hoboken, USA, DOI: 10.1002/mus.24905.
- Cormie, P., Singh, B., Hayes, S., Peake, J., Galvao, D., Taaffe, D., Spry, N., Nosaka, K., Cornish, B., Schmitz, K., Newton, R., (2016), Acute Inflammatory Response to Low-, Moderate-, and High-Load Resistance Exercise in Women With Breast Cancer? Related Lymphedema. *Integrative Cancer Therapies*, 15(3), 308-317, United States, DOI: 10.1177/1534735415617283.
- Choo, H., Nosaka, K., Peiffer, J., Abdullah, M., Yeo, V., Abbiss, C., (2016), Peripheral blood flow changes in response to postexercise cold water immersion. *Clinical Physiology and Functional Imaging*, Article in press(Article in press), 1-10, DOI: 10.1111/cpf.12380.
- Choo, H., Nosaka, K., Peiffer, J., Abdullah, M., Yeo, CC., Abbiss, C., (2016), Reliability of laser Doppler, near-infrared spectroscopy and Doppler ultrasound for peripheral blood flow measurements during and after exercise in the heat. *Journal of Sports Sciences*, early online(early online), 1-9, London, DOI: 10.1080/02640414.2016.1235790.
- Wu, S., Peiffer, J., Peeling, P., Brisswalter, J., Lau, W., Nosaka, K., Abbiss, C., (2016), Positive Swim Pacing Improves Sprint Triathlon Performance in Trained Athletes. *International Journal of Sports Physiology and Performance*, early online(early online), 18p., United States, DOI: 10.1123/ijsp.2015-0580.
- Tseng, K., Tseng, W., Lin, M., Chen, H., Nosaka, K., Chen, T., (2016), Protective effect by maximal isometric contractions against maximal eccentric exercise-induced muscle damage of the knee extensors. *Research in Sports Medicine*, 24(3), 228-241, DOI: 10.1080/15438627.2016.1202826.
- Chen, T., Chen, H., Lin, M., Yu, H., Nosaka, K., (2016), Contralateral repeated bout effect of eccentric exercise of the elbow flexors. *Medicine and Science in Sports and Exercise*, 48(10), 2030-2039, DOI: 10.1249/MSS.0000000000000991.
- Ochi, E., Tsuchiya, Y., Nosaka, K., (2016), Differences in post-exercise T2 relaxation time changes between eccentric and concentric contractions of the elbow flexors. *European Journal of Applied Physiology*, 116(1 Dec. 2016), 2145-2154, Germany, DOI: 10.1007/s00421-016-3462-3.



Contact:

Email: k.nosaka@ecu.edu.au

Telephone: (61 8) 6304 5655

Research Interests:

- Mechanisms of muscle pain induced after exercise
- Characteristics of muscle damage induced by eccentric exercise
- The repeated bout effect that attenuates the magnitude of muscle damage induced by single eccentric exercise bout
- Effects of eccentric exercise training on health and disease prevention
- Effects of exercise on health, fitness and anti-ageing

Associate Professor Chris Abbiss

PhD, BSc

Dr Abbiss' research interests centre on applied human physiology and exercise performance, with a focus on cycling, fatigue, thermoregulation, pacing strategies, training modalities and recovery. He is actively researching the effects of various training techniques on fatigue, physiological adaptations and performance in elite cycling. In addition, Dr Abbiss also works with industry partners examining fatigue, hydration, immune function and recovery in occupations exposed to heat stress (i.e. fire-fighters and miners).

Recent Publications

Book Chapters

- Abbiss, C., (2014), The regulation of pace during prolonged exercise in the heat: influence on optimal pacing strategies. *Science of Sport, Exercise and Physical Activity in the Tropics*, 35-42, New York.

Journal Articles

- Halperin, I., Chapman, D., Martin, D., Abbiss, C., Wulf, G., (2016), Coaching cues in amateur boxing: An analysis of ringside feedback provided between rounds of competition. *Psychology of Sport and Exercise*, 25(2016), 44-50, DOI: 10.1016/j.psychsport.2016.04.003.
- Halperin, I., Chapman, D., Martin, D., Abbiss, C., (2016), The effects of attentional focus instructions on punching velocity and impact forces among trained combat athletes. *Journal of Sports Sciences*, early online(early online), 1-8, London, DOI: 10.1080/02640414.2016.1175651.
- Abdullah, M., Watson, G., Abbiss, C., (2016), What are the Physiological Mechanisms for Post-Exercise Cold Water Immersion in the Recovery from Prolonged Endurance and Intermittent Exercise?. *Sports Medicine*, 46(8), 1095-1109, New Zealand, DOI: 10.1007/s40279-016-0483-3.
- Govus, AD., Peeling, P., Abbiss, C., Lawler, NG., Swinkels, DW., Thompson, KG., Peiffer, JJ., Gore, CJ., Garvican-Lewis, LA., (2016), Live high, train low ? influence on resting and post-exercise hepcidin levels. *Scandinavian Journal of Medicine and Science in Sports*, early online(early online), 10p., Denmark, DOI: 10.1111/sms.12685.
- Farley, O., Abbiss, C., Sheppard, J., (2016), Testing protocols for profiling of surfers' anaerobic and aerobic fitness: A review. *Strength and Conditioning Journal*, 38(5), 52-65, USA, DOI: 10.1519/SSC.0000000000000252.
- Choo, H., Nosaka, K., Peiffer, J., Abdullah, M., Yeo, V., Abbiss, C., (2016), Peripheral blood flow changes in response to postexercise cold water immersion. *Clinical Physiology and Functional Imaging*, Article in press(Article in press), 1-10, DOI: 10.1111/cpf.12380.
- Abbiss, C., Thompson, K., Lipski, M., Meyer, T., Skorski, S., (2016), Pacing differs between time- and distance-based time trials in trained cyclists. *International Journal of Sports Physiology and Performance*, Online first(Online first), 20p., United States, DOI: 10.1123/ijsp.2015-0613.
- Wu, S., Peiffer, J., Peeling, P., Brisswalter, J., Lau, W., Nosaka, K., Abbiss, C., (2016), Positive Swim Pacing Improves Sprint Triathlon Performance in Trained Athletes. *International Journal of Sports Physiology and Performance*, early online(early online), 18p., United States, DOI: 10.1123/ijsp.2015-0580.
- Choo, H., Nosaka, K., Peiffer, J., Abdullah, M., Yeo, CC., Abbiss, C., (2016), Reliability of laser Doppler, near-infrared spectroscopy and Doppler ultrasound for peripheral blood flow measurements during and after exercise in the heat. *Journal of Sports Sciences*, early online(early online), 1-9, London, DOI: 10.1080/02640414.2016.1235790.



Contact:

Email: c.abbiss@ecu.edu.au

Telephone: (61 8) 6304 5740

Research Interests:

- Exercise physiology
- Cycling performance
- Pacing strategies
- Hyperthermia and thermoregulation
- Recovery from exercise
- Training adaptation

Dr Nicolas Hart

PhD, AES, CSCSS, ESSAM

Dr Nicolas Hart is a post-doctoral research fellow at the Exercise Medicine Research Institute (an NHMRC Centre of Research Excellence) and an accredited exercise scientist, recently named 'Exercise Scientist of the Year' (Exercise and Sport Science Australia). His clinical oncology work focuses on the ability of exercise to change tumour biology, and attenuate tumour formation, growth and invasion in primary and secondary carcinomas, with his research funded by the National Breast Cancer Foundation, Movember Foundation and Cancer Council of Western Australia.

Dr Hart is currently leading a series of world-first, trials in humans to examine the suppressive or regressive effects of exercise on tumour morphology and tumour biomarkers in secondary carcinomas of advanced prostate and breast cancer patients with sclerotic and osteolytic spinal lesions. Dr Hart is the Global Exercise Co-ordinator for the Movember GAP4 (INTERVAL-MCRPC) trial - (the largest exercise trial in prostate cancer worldwide; investigating exercise and overall survival); and National Exercise Co-ordinator for the Movember TrueNTH Australia trial - (the provision of local and remote delivery of exercise as medicine to prostate cancer patients across metropolitan and regional Australia).

Recent Publications

Journal Articles

- Hart NH, Ireland A, Nimphius S, Rantalainen T, Siafarikas A, Newton RU. (2017). Mechanical basis of bone strength: Influence on bone material, bone structure and muscle action. *J Musculoskelet Neuronal Interact*. Ahead of Print. http://www.ismni.org/jmni/accepted/jmni_aa_HART.pdf
- Hart NH, Galvão DA, Newton RU. (2017). Exercise medicine for advanced prostate cancer. *Curr Opin Support Palliat Care*. Ahead of Print. DOI: 10.1097/SPC.0000000000000276. <https://www.ncbi.nlm.nih.gov/pubmed/28562375>
- Hart NH, Newton RU, Spry NA, Taaffe DR, Chambers SK, Feeney KT, Joseph DJ, Redfern AD, Ferguson T, Galvão DA. (2017). Can exercise suppress tumour growth in advanced prostate cancer patients with sclerotic bone metastases? A randomised, controlled study protocol examining feasibility, safety and efficacy. *BMJ Open*. 7(5):e014458.
- Hart NH, Nimphius S, Weber J, Spiteri T, Rantalainen T, Dobbin M, Newton RU. (2016). Musculoskeletal Asymmetry in Football Athletes: A product of limb function over time. *Med Exerc Sports Sci*. 48(7), 1379-1387.
- Hart NH, Nimphius S, Spiteri T, Cochrane JL, Newton RU. (2015). Segmental musculoskeletal examinations using Dual-energy X-ray Absorptiometry (DXA): Positioning and Analysis considerations. *J Sport Sci Med*. 14, 620-626.
- Hart NH, Nimphius S, Spiteri T, Newton RU. (2014). Leg strength and lean mass symmetry influences kicking performance in Australian Football. *J Sport Sci Med*. 13, 157-165.
- Hart NH, Spiteri T, Lockie RG, Nimphius S, Newton RU. (2014). Detecting deficits in change of direction performance using the pre-planned multi-directional Australian Football League Agility Test. *J Str Cond Res*. 28(12): 3552-3556.



Contact:

Email: n.hart@ecu.edu.au

Telephone: (61 8) 6304 3436

Research Interests:

- Exercise as Medicine
- Modulation of Tumour Biology
- Suppression of Bone Metastases
- Musculoskeletal Preservation
- Muscle-Bone Synergy
- Bone Adaptation to Loading
- Muscle-Bone Interactions
- Musculoskeletal Screening
- Asymmetry and Injury Incidence
- Change of Direction Performance

Associate Professor Gregory Haff

PhD

Associate Professor G. Gregory Haff is the Course Coordinator for the postgraduate degree in strength and conditioning in the School of Medical and Health Sciences. He has over 110 publications including in "Journal of Strength and Conditioning Research", "International Journal of Sport Physiology and Performance", "European Journal of Applied Physiology" and "European Journal of Sport Science". He is on the editorial boards of "Professional Strength & Conditioning", "Journal of Strength and Conditioning Research", and "Strength and Conditioning Journal". In 2014, A/Prof Haff was named the United Kingdom Strength and Conditioning Association's Strength and Conditioning Coach of the Year for Research and Education. Additionally, he was 2011 NSCA William J. Kramer Sport Scientist of the year award winner. He is a Founding Fellow of the National Strength and Conditioning Association. A/Prof Haff has written 10 book chapters on topics related to the periodization of training, is a co-author of "Periodization: Theory and Methodology of Training (5th Edition)", and co-editor of the 4th edition of the National Strength and Conditioning Association's Essentials of Strength and Conditioning Text. He has performed 120 invited talks worldwide including speaking at the "Beijing Sport University" and for the "Chinese Olympic Committee". His research examines the neuromuscular responses to resistance training.

Recent Publications

Journal Articles

- Hopper, E.E. Haff, O. Barley, C. Joyce, R.S. Llyod, and G.G. Haff. Neuromuscular training improves movement competency and physical performance measures in 11-13-year-old female netball athletes. *Journal of Strength and Conditioning Research* 31(5):1165-1176, 2017.
- L.P. James, L.A. Roberts, G.G. Haff, V.K. Kelly, and E.M. Beckman. The Validity and Reliability of a Portable Isometric Mid-Thigh Clean Pull. *Journal of Strength and Conditioning Research*, 31(5):1378-1386, 2017.
- S. Walker, K. Häkkinen, G. G. Haff, A. J. Blazevich, and R.U. Newton. Acute elevations in serum hormones are attenuated after chronic training with traditional isoinertial but not accentuated eccentric loads in strength-trained men. *Physiological Reports*, 5(7):e13241, 2017.
- L.P. James, S. Robertson, G.G. Haff, E. Beckman, and V. Kelly. Identifying the Performance Characteristics of a Winning Outcome in Elite Mixed Martial Arts Competition. *Journal of Science and Medicine in Sport*, 20(3):296-301, 2017.
- J.J. Tufano, L.E. Brown, and G.G. Haff. Theoretical and Practical Aspects of Different Cluster Set Structures: A Systematic Review. *Journal of Strength and Conditioning Research*, 31(3):848-867, 2017.
- L.P. James, G.G. Haff, V.G. Kelly, and E.M. Beckman. Using the Evidence Available to Inform Practice and Direct Future Research. *Sports Medicine*, 46(12):1967-1969, 2016.
- J.J. Tufano, J.A. Conlon, S. Nimphius, L.E. Brown, L.B. Seitz, B.D. Williamson, and G.G. Haff. Maintenance of Velocity and Power with Cluster Sets During High-Volume Back Squats. *International Journal of Sports Physiology and Performance*, 11(7):885-892, 2016.
- J.A. Conlon, R.U. Newton, J.J. Tufano, L. Peñailillo, H.G. Banyard, A.J. Hopper, A.J. Ridge, and G.G. Haff. Periodization Strategies in Older Adults: Impact on Neuromuscular Adaptations. *Medicine and Science in Sports and Exercise*, 48(12):2426-2436, 2016.



Contact:

Email: g.haff@ecu.edu.au

Telephone: (61 8) 6304 5416

Research Interests:

- Neuromuscular Adaptations to Strength and Power Based Training
- Training Theory: Periodization Modelling
- Tools for Evaluating Performance and Training
- Methods of Recovery
- Overtraining / Overreaching
- Physiological and Performance Adaptive Responses to Sequential Periodized Training Models
- Neuromuscular Adaptive Responses To Accentuated Eccentric Loading Models
- Hypertrophic Responses to Strength and Power Training
- Physiological and Performance Responses to Strength-Power-Potential Complexes

Professor Amanda Devine

PhD, AN, RPHNutr

Amanda is the Professor of Public Health and Nutrition in the School of Medical and Health Sciences. Prof Devine is the program coordinator for Nutrition and supervises postgraduate students in a range of nutrition research areas that extend from regional and remote nutrition and food security, and how patterns of eating impact gut health across the life course, chronic disease and clinical nutrition; food literacy and food and nutrition education. To extend the reach and impact of these research areas, with others Amanda has produced two cookbooks and developed four websites to implement and translate public health and educational projects.

Recent Publications

Journal Articles

- Lauren C Blekkenhorst, Jonathan M Hodgson, Joshua R Lewis, Amanda Devine, Richard J Woodman, Wai H Lim, Germaine Wong, Kun Zhu, Catherine P Bondonno, Natalie C Ward, Richard L Prince . (2017). Vegetable and fruit intake and fracture-related hospitalisations: a prospective study of older women. *Nutrients*. 2017 May 18;9(5). pii: E511. doi: 10.3390/nu9050511.
- Baker, S., Devine, A., Miller, M., & Dare, J. (2017, April). A multiliteracies approach to adolescent nutrition education. *Asia Pacific Food and Nutrition Collaboration Behavioural Nutrition Newsletter*, 4, pp. 1-2.
- Godrich, S.L., Lo, J., Davies, C.R., Darby, J., Devine, A. (2017). Are regional and remote Western Australian children eating for good health? An investigation into fruit and vegetable consumption. *Health Promotion Journal of Australia*. Advance Online Publication. doi: 10.1071/HE16090.
- Blekkenhorst LC, Prince RL, Ward NC, Croft KD, Lewis JR, Devine A, Shinde S, Woodman RJ, Hodgson JM, Bondonno CP. (2017). Development of a reference database for assessing dietary nitrate in vegetables. *Mol Nutr Food Res*. Jan 19. doi: 10.1002/mnfr.201600982. [Epub ahead of print] <http://dx.doi.org/10.1002/mnfr.201600982>
- Godrich, S.L., Davies, C.R., Darby, J., Devine, A. (2017). What are the determinants of food security among regional and remote Western Australian children? *Australian and New Zealand Journal of Public Health*. Advance Online Publication. doi: 10.1111/1753-6405.12636.
- Godrich, S.L., Lo, J., Davies, C.R., Darby, J., Devine, A. (2017). Which food security determinants predict adequate vegetable consumption among rural Western Australian children? *International Journal of Environmental Research and Public Health*. 14 (40), pp 1-15. doi:10.3390/ijerph14010040.
- Wallace, R., Costello, L., & Devine, A. (2017). Over-provision of discretionary foods at childcare dilutes the nutritional quality of diets for children. *Australian and New Zealand Journal of Public Health*, 28 Feb, DOI: 10.1111/1753-6405.12658
- Wallace, R., Devine, A., & Costello, L. (2017). Determining educators needs to support healthy eating environments in early childhood settings *Australasian Journal of Early Childhood*, in press.
- Genoni, A., Lyons-Wall, P., Lo, J., Devine, A., (2016), Cardiovascular, metabolic effects and dietary composition of ad-libitum paleolithic vs. Australian guide to healthy eating diets: A 4-week randomised trial. *Nutrients*, 8(5), Article no. 314, DOI: 10.3390/nu8050314.
- Wallace, R., Devine, A., (2016), Tailored nutrition education in the elderly can lead to sustained dietary behaviour change. *Journal of Nutrition, Health and Aging*, 20(1), 8-15, DOI: 10.1007/s12603-016-0669-2.



Contact:

Email: a.devine@ecu.edu.au
Telephone: (61 8) 6304 5527

Research Interests:

- Nutrition Education
- Food Literacy
- Gut Health
- Chronic Disease and Clinical Nutrition
- Food Security

Dr Elin Gray

PhD, MSc, BSc(Hons)

Dr Elin Gray is a Cancer Research Trust Postdoctoral Fellow and Senior Researcher at the Melanoma Research Group, within the School of Medical and Health Sciences at ECU. Prior to appointment at ECU, Elin worked at the National Institute for Communicable Diseases in South Africa; the Vaccine Research Center at the NIH, USA and the Duke Human Vaccine Institute, Duke University, USA. Elin's previous research focused in immunology and virology before relocating to Edith Cowan University in 2011. Dr Gray's current research aims to identify blood biomarkers for diagnosis of melanoma and to guide treatment decisions. Her team develops and utilises novel methodologies for genetic analysis of melanoma biomarkers such as in circulating tumour cells, circulating tumour DNA and exosomes. This provides information on tumour evolution and cancer development. In addition, Dr Gray is interested in identifying mechanisms of drug resistance and developing better treatment strategies. Dr Gray works in close collaboration with leading oncologists and pathologists to translate these results into clinical application.

Recent Publications

Book Chapters

- Freeman, J., Gray, E., Ziman, M., (2015), Circulating Tumor Cells as Biomarkers in Cancer. *Biomarkers in Cancer*, 31-51, London, UK, DOI: 10.1007/978-94-007-7681-4_21.

Journal Articles

- Calapre, L., Gray, E., Kurdykowski, S., David, A., Hart, P., Descargues, P., Ziman, M., (2016), Heat-mediated reduction of apoptosis in UVB-damaged keratinocytes in vitro and in human skin ex vivo. *BMC Dermatology*, 16(1), Article no. 6, London, UK, DOI: 10.1186/s12895-016-0043-4.
- Zaenker, P., Gray, E., Ziman, M., (2016), Autoantibody Production in Cancer? The Humoral Immune Response toward Autologous Antigens in Cancer Patients. *Autoimmunity Reviews*, 15(5), 477-483, DOI: 10.1016/j.autrev.2016.01.017.
- Gray, E., Reid, A., Bowyer, S., Calapre, L., Siew, K., Pearce, R., Cowell, L., Frank, M., Millward, M., Ziman, M., (2015), Circulating Melanoma Cell Subpopulations: Their Heterogeneity and Differential Responses to Treatment. *Journal of Investigative Dermatology*, 135(8), 2040-2048, London, United Kingdom, DOI: 10.1038/jid.2015.127.
- Reid, A., Freeman, J., Millward, M., Ziman, M., Gray, E., (2015), Detection of BRAF-V600E and V600K in melanoma circulating tumour cells by droplet digital PCR. *Clinical Biochemistry*, 48(15), 999-1002, Philadelphia, USA, DOI: 10.1016/j.clinbiochem.2014.12.007.
- Gray, E., Rizos, H., Reid, A., Boyd, S., Pereira, M., Lo, J., Tembe, V., Freeman, J., Lee, J., Scolyer, R., Siew, K., Lomma, C., Cooper, A., Khattak, M., Meniawy, T., Long, G., Carlino, M., Millward, M., Ziman, M., (2015), Circulating tumor DNA to monitor treatment response and detect acquired resistance in patients with metastatic melanoma. *Oncotarget*, 6(39), 42008-42018, New York, USA, DOI: 10.18632/oncotarget.5788.



Contact:

Email: e.gray@ecu.edu.au

Telephone: (61 8) 6304 2756

Research Interests:

- Identifying mechanisms of drug resistance
- Developing better treatment strategies

Associate Professor Simon Laws

PhD, BSc

Associate Professor Simon Laws currently leads The Collaborative Genomics Group, within the Centre of Excellence for Alzheimer's Disease Research and Care, part of ECU's School of Medical and Health Sciences. His research primarily focuses on understanding the genetic and epigenetic architecture of Alzheimer's Disease and related phenotypes, such as changes in memory performance and pathognomonic features. His group utilizes an integrative "omic" approach to Alzheimer's Disease research through combining genetic, epigenetic and comprehensive longitudinal phenotype data. He is also currently the Deputy Chief Scientific Officer of the Cooperative Research Centre (CRC) for Mental Health.

Recent Publications

Journal Articles

- Villemagne, V. L., Doré, V., Bourgeat, P., Burnham, S. C., Laws, S., Salvado, O., ... & Rowe, C. C. (2017). A β -amyloid and Tau Imaging in Dementia. In *Seminars in Nuclear Medicine* (Vol. 47, No. 1, pp. 75-88).
- Pietrzak, R., Laws, S., Lim, Y., Bender, S., Porter, T.L., Doecke, J., Ames, D., Fowler, C., Masters, C., Milicic, L., Rainey-Smith, S.R., Villemagne, V., Rowe, C., Martins, R.N., Maruff, P. (2017). Plasma cortisol, brain amyloid- β , and cognitive decline in preclinical Alzheimer's disease: A 6-year prospective cohort study. *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging*. 2(1), 45 - 52.
- Hollands, S., Lim, Y. Y., Laws, S. M., Villemagne, V. L., Pietrzak, R. H., Harrington, K., ... & Rainey-Smith, S. R. (2017). APOE ϵ 4 Genotype, Amyloid, and Clinical Disease Progression in Cognitively Normal Older Adults. *Journal of Alzheimer's Disease*. 57(2) 411 - 422
- Lim, Y., Laws, S., Villemagne, V., Pietrzak, R., Porter, T., Ames, D., Fowler, C., Rainey-Smith, S., Snyder, P., Martins, R., Salvado, O., Bourgeat, P., Rowe, C., Masters, C., Maruff, P., (2016), A β -related memory decline in APOE ϵ 4 non-carriers: Implications for Alzheimer's disease. *Neurology*, 86(17), 1635-1642, DOI: 10.1212/WNL.0000000000002604.
- Holmes, S., Esterlis, I., Mazure, C., Lim, YY., Ames, D., Rainey-Smith, S., Martins, R., Salvado, O., Dore, V., Villemagne, V., Rowe, C., Laws, S., Masters, C., Maruff, P., Pietrzak, R., (2016), τ -Amyloid, APOE and BDNF Genotype, and Depressive and Anxiety Symptoms in Cognitively Normal Older Women and Men. *American Journal of Geriatric Psychiatry*, 24(12), 1191-1195, DOI: 10.1016/j.jagp.2016.08.007.
- Lim, YY., Villemagne, V., Laws, S., Pietrzak, R., Ames, D., Fowler, C., Rainey-Smith, S., Snyder, P., Bourgeat, P., Martins, R., Salvado, O., Rowe, C., Masters, C., Maruff, P., (2016), Performance on the Cogstate Brief Battery Is Related to Amyloid Levels and Hippocampal Volume in Very Mild Dementia. *Journal of Molecular Neuroscience*, 60(3), 362-370, DOI: 10.1007/s12031-016-0822-8.
- Pietrzak, R., Laws, S., Lim, YY., Bender, S., Porter, T., Doecke, J., Ames, D., Fowler, C., Masters, C., Milicic, L., Rainey-Smith, S., Villemagne, V., Rowe, C., Martins, R., Maruff, P., (2016), Plasma cortisol, brain amyloid- β , and cognitive decline in preclinical Alzheimer's disease: A 6-year prospective cohort study. *Biological Psychiatry*, 2(1), 45-52, DOI: 10.1016/j.bpsc.2016.08.006.
- Burnham, S., Rowe, C., Baker, D., Bush, A., Doecke, J.D., Faux, N., Laws, S., Martins, R., Maruff, P., Macaulay, S., Rainey-Smith, S., Savage, G., Ames, D., Masters, C., Wilson, W., Villemagne, V., (2016), Predicting Alzheimer disease from a blood-based biomarker profile. *Neurology*, 87(11), 1093-1101, DOI: 10.1212/WNL.0000000000003094.



Contact:

Email: s.laws@ecu.edu.au

Telephone: (61 8) 6304 5128

Research Interests:

- Understanding the Genomic Architecture of Rates of Change in Alzheimer's Disease-related phenotypes
- The interaction of genomics and modifiable lifestyle factors and the impact on rates of change in Alzheimer's Disease-related phenotypes

Dr Stephanie Rainey-Smith

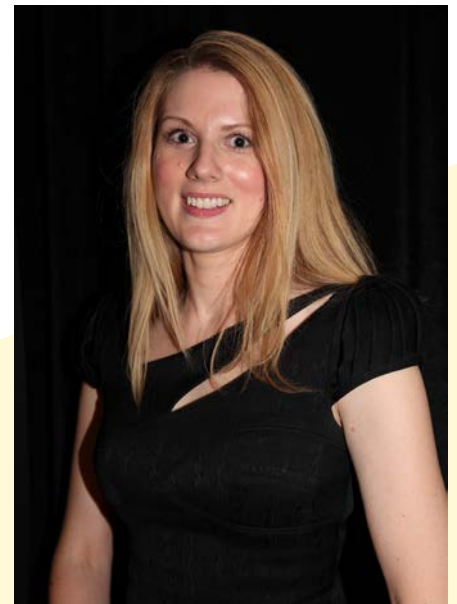
PhD

Dr Stephanie Rainey-Smith is a Senior Research Fellow in the Centre of Excellence for Alzheimer's Disease Research and Care. Stephanie was awarded a PhD in Neuroscience from the prestigious King's College London in 2010. Stephanie's primary research focus is the identification of lifestyle factors (e.g. sleep, diet and physical activity) which impact upon cognitive decline and Alzheimer's disease (AD) -related pathology. Stephanie has employed multidisciplinary research approaches in order to make significant contributions to the field of lifestyle and biomarker research in AD. Evidence of this cross-disciplinary research is apparent in her publication record where lifestyle factors are combined with clinical, neuroimaging and blood-based biomarker outcome measures. Stephanie has had success in attracting internal and external funding. She has been awarded over \$34,000 in internal funding from ECU and more than \$1,275,000 in external and commercial funding; including awards from philanthropic and non-governmental organizations to facilitate further AD-focussed lifestyle and biomarker research as Principal Investigator.

Recent Publications

Journal Articles

- Lim, Y., Laws, S., Villemagne, V., Pietrzak, R., Porter, T., Ames, D., Fowler, C., Rainey-Smith, S., Snyder, P., Martins, R., Salvado, O., Bourgeat, P., Rowe, C., Masters, C., Maruff, P., (2016), A β -related memory decline in APOE ϵ 4 non-carriers: Implications for Alzheimer's disease. *Neurology*, 86(17), 1635-1642, DOI: 10.1212/WNL.0000000000002604.
- Pietrzak, R., Laws, S., Lim, YY, Bender, S., Porter, T., Doecke, J., Ames, D., Fowler, C., Masters, C., Milicic, L., Rainey-Smith, S., Villemagne, V., Rowe, C., Martins, R., Maruff, P., (2016), Plasma cortisol, brain amyloid- β , and cognitive decline in preclinical Alzheimer's disease: A 6-year prospective cohort study. *Biological Psychiatry*, 2(1), 45-52, DOI: 10.1016/j.bpsc.2016.08.006.
- Holmes, S., Esterlis, I., Mazure, C., Lim, YY, Ames, D., Rainey-Smith, S., Martins, R., Salvado, O., Dore, V., Villemagne, V., Rowe, C., Laws, S., Masters, C., Maruff, P., Pietrzak, R., (2016), β -Amyloid, APOE and BDNF Genotype, and Depressive and Anxiety Symptoms in Cognitively Normal Older Women and Men. *American Journal of Geriatric Psychiatry*, 24(12), 1191-1195, DOI: 10.1016/j.jagp.2016.08.007.
- Burnham, S., Rowe, C., Baker, D., Bush, A., Doecke, JD., Faux, N., Laws, S., Martins, R., Maruff, P., Macaulay, S., Rainey-Smith, S., Savage, G., Ames, D., Masters, C., Wilson, W., Villemagne, V., (2016), Predicting Alzheimer disease from a blood-based biomarker profile. *Neurology*, 87(11), 1093-1101, DOI: 10.1212/WNL.0000000000003094.
- Francois, M., Fenech, M., Thomas, P., Hor, M., Rembach, A., Martins, R., Rainey-Smith, S., Masters, C., Ames, D., Rowe, C., Macaulay, S., Hill, A., Leifert, W., Aibl Lifestyle Study Research Group, T., (2016), High Content, Multi-Parameter Analyses in Buccal Cells to Identify Alzheimer's Disease. *Current Alzheimer Research*, 13(7), 787-799.
- Gardener, S., Sohrabi, H., Shen, K., Rainey-Smith, S., Weinborn, M., Bates, K., Shah, T., Foster, J., Lenzo, N., Salvado, O., Laske, C., Laws, S., Taddei, K., Martins, R., (2016), Cerebral Glucose Metabolism is Associated with Verbal but not Visual Memory Performance in Community-Dwelling Older Adults. *Journal of Alzheimer's Disease*, 52(2), 661-672, Netherlands, DOI: 10.3233/JAD-151084.



Contact:

Email: s.rainey-smith@ecu.edu.au

Telephone: (61 8) 6304 2649

Research Interests:

- Identification of lifestyle factors (such as sleep, diet and physical activity) which impact upon cognitive decline and Alzheimer's disease (AD)-related pathology (specifically neuroimaging and cerebrospinal fluid biomarkers)
- Investigating these lifestyle factors as potential preventative and therapeutic interventions for AD

Associate Professor Annette Raynor

PhD

Associate Professor Raynor has extensive knowledge and skills in the area of Exercise and Sports Science and draws on her experience in three universities in Australia and internationally, and her various roles in lecturing, research, and senior management to inform her practice. A/Prof Raynor has been a member of Exercise and Sports Science Australia (ESSA) for over 20 years, is an Executive Member of the National University Course Accreditation Program for Exercise and Sports Science, and past-President of the Council of Heads of Exercise, Sport and Movement Sciences.

A/Prof Raynor's research is in the area of Motor Control and Motor Learning, and is centred on three main themes: Improving motor performance capability across the lifespan; talent identification for sport; and the development of expertise in decision-making. Her current research includes a focus on older adults in residential aged care settings and young children with Developmental Coordination Disorder, improving motor performance using intervention strategies that are underpinned by motor learning principles. In the area of applied sports science, she works together with the Australian Institute of Sport and national sporting organisations to develop talent identification models to enhance the development of the next generation of elite sports people. A/Prof Raynor is also interested in how experts in a variety of areas make the right decision at the right time during time constrained, highly pressured environments. Knowledge of how this occurs will inform the training of decision making skills in sport.

Recent Publications

Journal Articles

- Ward, E., Hillier, S., Raynor, A., & Petkov, J. (2017). Effective service delivery modes for children with developmental coordination disorder: a randomised controlled trial. *Paediatric Physical Therapy*. 29(3).
- Nolan, R., Raynor, A., Berry, N., & May, E. (2016). Self-reported physical activity using the International Physical Activity Questionnaire (IPAQ) in Australian adults with type 2 diabetes, with and without peripheral neuropathy. *Canadian Journal of Diabetes*. 40(6), 576–579.
- Keller, B., Raynor, A.J., Bruce, L. & Iredale, F. (2016). Technical attributes of Australian youth soccer players. *International Journal of Sports Science & Coaching*. 11(6), 819-824.
- Woods, C., Raynor, A., Bruce, L., McDonald, Z., & Robertson, S. (2016). The application of a multi-dimensional assessment approach to talent identification in Australian football. *Journal of Sports Sciences*. 34 (14), 1340-1345.
- Woods, C., Raynor, A., Bruce, L., McDonald, Z. (2016). Discriminating talent identified junior Australian Football players using a video decision-making task. *Journal of Sports Sciences*. 34(4), 342-347.
- Woods, C., Raynor, A., Bruce, L., McDonald, Z. (2015). The use of skill tests to predict status in junior Australian Football. *Journal of Sports Sciences*. 33(11), 1132-1140.
- Woods, C., Raynor, A., Bruce, L., McDonald, Z. & Collier, N. (2015). Predicting playing status in junior Australian Football using physical and anthropometric parameters. *Journal of Science and Medicine in Sport*. 18, 225-229.
- Bruce, L., Farrow, D., & Raynor, A. (2013). Performance milestones in the development of expertise: Are they critical? *The Journal of Applied Sport Psychology*. 25(3), 281-297.



Contact:

Email: a.raynor@ecu.edu.au
Telephone: (61 8) 6304 2771

Research Interests:

- Developmental Coordination Disorder
- Exercise and aged care
- Talent identification for sport
- Development of expertise in decision-making

Professor Russell Jones

PhD, BEd (Hons), DipEd, BSc

Professor Russell Jones is the Professor of Clinical Education in the School of Medical and Health Sciences. He earned his PhD at the University of Massachusetts (USA). He has over 30 years academic and professional experience and joined ECU in 2013. Prior to his appointment at ECU, Russell held executive leadership roles in health and research institutions both nationally and internationally. These included inaugural Director of Education for the Australian and New Zealand College of Anaesthetists, Director of Assessment for the Royal Australian College of General Practitioners, and Foundation Director of the Fatima College of Health Sciences in the United Arab Emirates. Most recently, Russell was appointed the Professor of Clinical Education for Edith Cowan University and the Royal Flying Doctor Service. Russell also holds the position of Honorary Educator with the Australian Resuscitation Council and an Adjunct Professorship with Monash University.

Recent Publications

Book Chapters

- Jones, R. W. (2016). Teaching and learning in simulation using the problem-based approach. In R. Riley (Ed.), *A Manual of Simulation in Healthcare* (2nd ed). Oxford, UK: Oxford University Press, pp. 221-234.

Journal Articles

- Holmes, L., Brightwell, R., Cohen, L., & Jones, R.W. (in press). Student paramedic anticipation, confidence and fears: Do undergraduate courses prepare student paramedics for the mental health challenges of the profession? *Australasian Journal of Paramedicine*.
- Jones, R.W., Currow, K., Kwong, M. & Menon, P. (2016). An innovation in child health: Globally reaching out to child health professionals. *Family Medicine and Community Health*, 4(3), 1-10.
- Jones, R., Langford, S., (2016), Australia's flying doctors. How the world's largest aeromedical response service provides effective patient retrieval in the Outback. *Journal of Emergency Medical Services*, 40(4), 39-43.
- Jones, R.W. (2009). Accurately assessing candidates for general practice. *Australian Family Physician*, 38(4), 225-227.
- Jones, R.W., Rawlin, M., Atkinson K., Radford J., Au L. & Egglestone D. (2009). Lessons from the Past: Historical Trends in the RACGP Examination. *Australian Family Physician*, 38(9), 708-10.
- Jones, R.W. (2008). Anaesthesiology training within Australian and New Zealand. *Journal of Medical Sciences*, 28(1), 1-8.
- Jones, R.W. (2007). The influence of student learning styles and faculty teaching preferences on medical school approaches to problem-based learning. *Journal of Medical Sciences*, 27(5), 189-196.
- Jones, R.W. (2007). Learning and teaching in small groups: Characteristics, benefits, problems and approaches. *Anaesthesia and Intensive Care*, 35(4), 587-592.
- Jones, R.W. (2007). Medical specialist examinations: Item format types and minimising error. *Anaesthesia and Intensive Care*, 35(1). 80-85.
- Jones, R.W. (2006). Problem based learning: description, advantages, disadvantages, scenarios and facilitation. *Anaesthesia and Intensive Care*, 34(4), 485-488.
- Jones, R.W., & Morris R.W. (2006). Facilitating learning in the operating theatre and intensive care unit. *Anaesthesia and Intensive Care*, 34(6), 758-764.



Contact:

Email: russell.jones@ecu.edu.au

Telephone: (61 8) 6304 2043

Research Interests:

- Simulation research
- Emergency response
- Paramedicine
- Aeromedical retrieval
- Design and evaluation of educational programs

Associate Professor Sue Reed

PhD, MSc, MEngSc, BA/BSc

Sue is the Associate Professor in Occupational Hygiene and responsible for the responsible for the occupational Health and Safety and Occupational Hygiene courses in the School of Medical & Health Sciences. She has previously worked at the University of Western Sydney, the Department of Defence Production, and the Department of Labour. She is a Fellow of the Australian Institute of Occupational Hygienists and of the Safety Institute of Australia.

Recent Publications

Books

- Reed, S., Benke, G., Pisaniello, D. & Burton, K. (Editors). 2013, Principles of Occupational Health and Hygiene: An Introduction (2nd Ed) Allen & Unwin, Sydney Australia.

Book Chapters

- Reed, S & Sheppard, M. 2013, 'Indoor Air Quality', in S. Reed, G Benke, D Pisanellio and K. Burton (eds) Principles of Occupational Health and Hygiene: An Introduction (2nd Ed, pp. 275-305) Allen & Unwin, Sydney Australia.
- Pisaniello, D., Morris, H., Rajan, B. & Reed, S. 2013, 'Emerging and Evolving Issues', in S. Reed, G Benke, D Pisanellio and K. Burton (eds) Principles of Occupational Health and Hygiene: An Introduction (2nd Ed, pp. 484-507) Allen & Unwin, Sydney Australia.

Journal Articles

- North, S., Reed, S. & Burton, H., (2017), The relationship between dermal lead levels and blood lead levels in fire assay workers, *Journal of Health, Safety and Environment*. 33(1), 41-52.
- Chatfield, M., Reed, S. & Gregory Ho, G., 2017, A balancing act: a pilot study exploring fall incident rates and the potential role of functional balance screening tools and balance programs in reducing fall incidents rates in older workers in the steel manufacturing industry, *Journal of Health, Safety and Environment*. 33(1), 73-86
- McCarthy, A. & Reed, S., 2016, Diesel particulate filters: Do they work? A study on the efficacy of diesel particulate filters in reducing personal exposure to diesel particulate matter on underground diamond drillers, *Journal of Health, Safety and Environment*. 32(3), 79-82.
- Filippin, P., Reed, S. & Cross, M. 2016, A Study of the Exposure to Wood Dust and Potential Impact on Lung Function *Journal of Health, Safety and Environment*. 32(1), 1-8.
- Smith, T., Oosthuizen, J., Reed, S. & Yates, J. 2014, Assessing airborne contaminant exposures during cold splicing and hot splicing of conveyor belts in the Western Australian mining sector, *J Health & Safety Research & Practice* 6(2), 11-17.
- Gaskin, S. Pisaniello, D. Edwards, J. W. Bromwich, D. Reed, S. Logan, M. & Baxter, C. 2014. In-vitro methods for testing dermal absorption and penetration of toxic gases, *Toxicology Mechanisms and Methods*, 24:1, 70-72, DOI: 10.3109/15376516.2013.859193
- Gaskin, S., Pisaniello, D., Edwards, J.W., Bromwich, D., Reed, S., Logan, M. & Baxter, C. 2013, Chlorine and hydrogen cyanide gas interactions with human skin: In vitro studies to inform skin permeation and decontamination in HAZMAT incidents. *Journal of Hazardous Materials*, 262(x), 759-765.



Contact:

Email: s.reed@ecu.edu.au

Telephone: (61 8) 6304 2243

Research Interests:

- Workplace exposures to particulates and chemicals and how they can be controlled
- Workplace exposures to noise and methods of control
- Indoor air quality
- Skin exposure to chemicals.
- Occupational hygiene exposures in agriculture
- Bioaerosols in the workplace
- Implementation of PPE in the workplace

Associate Professor Jacques Oosthuizen

Associate Dean Public Health and Occupational Health & Safety
PhD, BTech

Jacques is the Associate Dean of Public Health and OHS in the School of Medical and Health Sciences. Jacques also teaches and conducts research in the areas of occupational hygiene and epidemiology. He has been an academic in the area of Environmental Health and Occupational Hygiene since 1989, initially in South Africa. In 1999 Jacques was employed at Central Queensland University and in 2001 he relocated to ECU. He is a member of Environmental Health Australia and the Safety Institute of Australia.

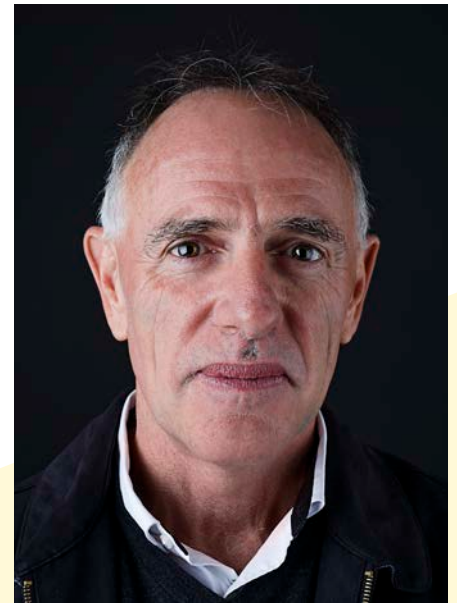
Recent Publications

Book Chapters

- Mate, J., Oosthuizen, J., (2012), Global warming and heat stress among Western Australian mine, oil and gas workers. *Environmental Health - Emerging Issues and Practice*, 289-305, Rijeka, Croatia, DOI: 10.5772/34794.

Journal Articles

- Staples, K., Oosthuizen, J., Lund, M., (2016), Effectiveness of S-Methoprene Briquets and Application Method for Mosquito Control in Urban Road Gullies/Catch Basins/Gully Pots in a Mediterranean Climate: Implications for Ross River Virus Transmission. *Journal of the American Mosquito Control Association*, 32(3), 203-209, United States of America, DOI: 10.2987/16-6563.1.
- Mate, J., Siegel, R., Oosthuizen, J., Laursen, P., (2016), Effect of Liquid versus Ice Slurry Ingestion on Core Temperature during Simulated Mining Conditions. *Open Journal of Preventive Medicine*, 6(1), 21-30, USA, DOI: 10.4236/ojpm.2016.61002.
- Frimpong, K., Van Etten, E., Oosthuizen, J., Nunfam, V., (2016), Heat exposure on farmers in Northeast Ghana. *International Journal of Biometeorology: the description, causes, and implications of climatic change, early online(early online)*, 10p., DOI: 10.1007/s00484-016-1219-7.
- Frimpong, K., Van Etten, E., Oosthuizen, J., (2016), Barriers of adaptation to heat stress in Northeast Ghana. *The International Journal of Climate Change: Impacts and Responses*, 8(2), 53-65, DOI: 10.18848/1835-7156/CGP.
- Frimpong, K., Van Etten, E., Oosthuizen, J., Fannam, VN., (2015), Review of climate change adaptation and social protection policies of Ghana: The extent of reducing impacts of climate change and heat stress vulnerability of smallholder farmers. *International Journal of Social Ecology and Sustainable Development*, 6(4), 1-14, Hershey, USA, DOI: 10.4018/IJSESD.2015100101.
- Parker, I., Oosthuizen, J., Costello, L., (2015), Do facial characteristics influence acceptance of health and safety messages?. *International Journal of Health Sciences*, 3(1), 77-91, USA, DOI: 10.15640/ijhs.v3n1a5.
- Trompf, P., Oosthuizen, J., (2015), Crystalline silica exposure of workers using autoclaved aerated concrete (AAC) products. *Journal of Health, Safety and Environment*, 31(1), 499-512, North Ryde, NSW.
- Frimpong, K., Oosthuizen, J., Van Etten, E., (2014), Experiences of heat stress vulnerability and climate change among farmers in Ghana. *Journal of Environment and Earth Science*, 4(17), 100-110.
- Frimpong, K., Oosthuizen, J., Van Etten, E., (2014), The extent of heat on health and sustainable farming in Ghana - Bawku East. *Sustainable agriculture research*, 3(3), 56-64, Canada, DOI: 10.5539/sar.v3n3p56.



Contact:

Email: j.oosthuizen@ecu.edu.au
Telephone: (61 8) 6304 5876

Research Interests:

- Occupational exposure assessment
- Coal Miners pneumoconiosis (black lung)
- Heat stress
- Climate change and heat adaptation strategies in the developing world
- Mosquito vector and disease control

Dr Martyn Cross

PhD, MPH

Dr Martyn Cross began his career as a Toxicologist working in the UK chemical industry. He has an honours degree in Toxicology, a Master of Public Health and a PhD. Martyn was an Occupational Hygienist for WorkSafe WA, and an Occupational Hygienist for the WA Department of Health. Martyn then specialised as a Safety Management System Consultant for an international consultancy group, assisting organisations in Australia and South East Asia, to develop and implement their safety management systems.

Martyn was the Senior Safety Advisor and then the Principal Occupational Hygienist for Minara Resources at their Murrin Murrin Mine Site where he conducted a Health Surveillance project for his PhD. Martyn was recently employed as the Senior Occupational Hygiene Consultant with Golder Associates. He is now a Senior Lecturer at ECU with a teaching and research role in Post Graduate – Occupational Health and Safety. Martyn has over 35 years expertise and his skills span many aspects of occupational health and safety, in a variety of industries.

Recent Publications

Journal Articles

- Filippin, P., Reed, S., & Cross, M. (2016). A Study of the Exposure to Wood Dust and Potential Impact on Lung Function. *Journal of Occupational Health and Safety*. Australia and New Zealand. CCH Australia.
- Cross, M. & Oosthuizen, J. (2013). Occupational respiratory health surveillance at Minara Resources, Murrin Murrin mine site. *Journal of Health, Safety and Environment*. 29(1), pp. 21-34.
- Cross, M. (2005). Dust and Biological Monitoring During Vanadium Catalyst Change- Out. Is it the Dust Levels or the Hand-to-Mouth Contact? *Environmental Health*. 5(3)
- Cross, M. (2005) Report on current and proposed occupational health and safety practices in the Australian Nickel industry. *World Safety Journal*.15(1), 23-25.
- Oosthuizen, J. & Cross, M. (2004). Occupational hygiene monitoring of respiratory hazards: A case study. *Environmental Health*, 4(3), 32-39.

Conference Presentations

- Cross, M, & Oosthuizen J. (2011). Brisbane. Occupational respiratory health surveillance at Minara Resources, Murrin Murrin Mine Site. 29th AIOH Australian Institute of Occupational Hygienists Conference. Perth Queensland
- Cross, M. (2005). Nickel: Dust monitoring and biomonitoring results. Presentation at Laterites Workshop, Brisbane, 24-25 February, 2005, Cliftons, Adelaide Street, Brisbane, Australia.



Contact:

Email: m.cross@ecu.edu.au

Telephone: (61 8) 6304 5764

Research Interests:

- Workplace exposures to occupational health hazards and how they can be controlled
- Workplace Health Surveillance
- Synergist effects of occupational health hazards
- Analysis of incident data to assist industry identify preventative strategies
- Implementation of Safety Management Systems

Dr Marcus Cattani

PhD, BTech

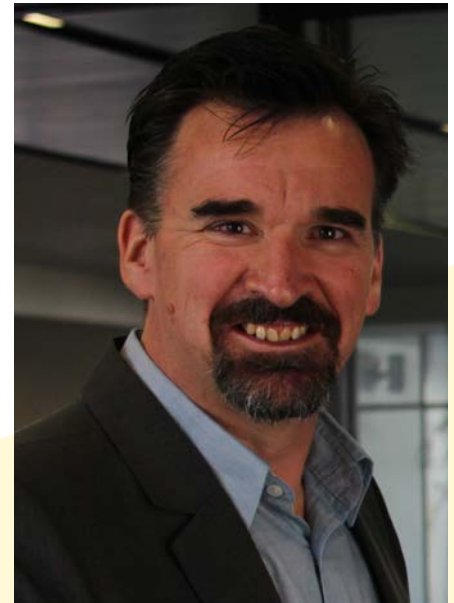
Dr Marcus Cattani is a Senior Lecturer in Occupational Health and Safety within the School of Medical and Health Sciences. He earned his Masters degree at the Institute of Occupational Medicine/University of Aberdeen (Scotland, UK) and his PhD at Murdoch University (WA, Australia) by conducting research concerned with the analysis of multi-route (i.e. inhalation, dermal) exposure to hazardous chemicals, and development of initiatives to reduce exposure, with a particular focus on addressing risk taking behaviour. Dr Cattani has worked in academia for 10 years writing materials in a range of subjects including occupational hygiene, safety management, risk management and systems safety. In addition to his academic career Marcus has worked in the resources industry, engineering, and chemical industries for around 15 years in a variety of roles, most recently as a Senior HSE Manager and consultant in the mining industry. Marcus's practical leadership knowledge, understanding of industry and governmental requirements together with a background in risk management have resulted in a series of industry and government research projects.

Marcus is a Committee member and Chartered professional of the Safety Institute of Australia (WA), a Full Member and past State Coordinator of the Australian Institute of Occupational Hygienists, and an OSH Committee Member at the Chamber of Minerals and Energy (WA).

Recent Publications

Journal Articles

- Cattani, M. (2015) The Journey Program for Safety Leaders. Fremantle. Cattani Consulting
- Blewitt, V., Rainbird, S., Dorrian, J., Paterson, J., Cattani, M., (2012), Keeping rail on track: Preliminary findings on safety culture in Australian rail. *Work: A Journal of Prevention, Assessment and Rehabilitation*, 41(Suppl. 1), 4230-4236, Amsterdam, Netherlands, DOI: 10.3233/WOR-2012-0124-4230.
- Cattani, M. (2012) The Journey Program for Supervisors. Fremantle. Cattani Consulting
- Dyer, S., Cattani, M., Pisaniello, D., Edwards, J. (2002) Peripheral cholinesterase inhibition by occupational chlorpyrifos exposure in Australian termiticide applicators. *Toxicology* 169 (3) 177-85
- Cattani, M., Cena, K., Edwards, D., Pisaniello, D. Potential dermal and inhalation exposure to chlorpyrifos in Australian pesticide workers. *Annals of Occupational Hygiene* 45(4) 299-308
- Cattani, M., Cena, K., Edwards, J., Pisaniello, d. Pest control operators: Risk perception of the use of chlorpyrifos. *Journal of Occupational Health and safety – Australia and New Zealand* 17(3) 295-299



Contact:

Email: m.cattani@ecu.edu.au

Telephone: (61 8) 6304 2346

Research Interests:

- Injury risk communication
- Development of organisational performance using injury risk as an indicator
- Evaluation of incident data to assist elimination of fatalities and significant incidents
- Assisting Small and Medium sized Enterprises, and voluntary organisations, prevent harm
- Understanding and managing risk taking behaviour in the workplace
- Design of safety management systems using the new ISO 45001
- Development of effective OHS professionals

Dr Travis Cruickshank

PhD

Travis is a postdoctoral researcher in the ECU Huntington's Disease Research Team. His research focuses on the development of novel non-pharmaceutical treatment strategies aimed at delaying the onset and slowing the progression of Huntington's disease (HD).

Recent Publications

Journal Articles

- Bartlett, D., Cruickshank, T., Hannan, A., Eastwood, P., Lazar, A., Ziman, M., (2016), Neuroendocrine and neurotrophic signaling in Huntington's Disease: Implications for pathogenic mechanisms and treatment strategies. *Neuroscience and Biobehavioral Reviews*, 71(2016), 444-454, DOI: 10.1016/j.neubiorev.2016.09.006.
- Collins, L., Begeti, F., Panin, F., Lazar, A., Cruickshank, T., Ziman, M., Mason, S., Barker, R., (2015), Novel Nut and Bolt Task Quantifies Motor Deficits in Premanifest and Manifest Huntington's Disease. *PLoS Currents*, 7(Huntington Disease), online, San Francisco, USA, DOI: 10.1371/currents.hd.ded251617ae62a1364506b0521bd3761.
- Cruickshank, T., Thompson, J., Dominguez, J., Reyes, A., Bynevelt, M., Georgiou-Karistianis, N., Barker, R., Ziman, M., (2015), The effect of multidisciplinary rehabilitation on brain structure and cognition in Huntington's disease: an exploratory study. *Brain and Behavior*, 5(2), 1-10, West Sussex, UK, DOI: 10.1002/brb3.312.
- Cruickshank, T., Reyes, A., Ziman, M., (2015), A systematic review and meta-analysis of strength training in individuals with Multiple Sclerosis or Parkinson disease. *Medicine*, 94(4), e411, DOI: 10.1097/MD.0000000000000411.
- Cruickshank, T., Reyes, A., Penailillo, L., Thompson, J., Ziman, M., (2014), Factors that contribute to balance and mobility impairments in individuals with Huntington's disease. *Basal Ganglia*, 4(2), 67-70, Netherlands, DOI: 10.1016/j.baga.2014.04.002.
- Reyes, A., Cruickshank, T., Nosaka, K., Ziman, M., (2014), Respiratory muscle training on pulmonary and swallowing function in patients with Huntington's disease: A pilot randomised controlled trial. *Clinical Rehabilitation*, 29(10), 961-973, DOI: 10.1177/0269215514564087.
- Reyes, A., Cruickshank, T., Ziman, M., Nosaka, K., (2014), Pulmonary function in patients with Huntington's Disease. *BMC Pulmonary Medicine*, 14(1), Article No. 89, DOI: 10.1186/1471-2466-14-89.



Contact:

Email: t.cruickshank@ecu.edu.au

Telephone: (61 8) 6304 3640

Research Interests:

- Investigation of the effects of novel non-pharmaceutical treatment strategies on clinical and biological predictors of disease progression in patients with Huntington's disease
- Exploring the neural mechanisms underpinning the onset and progression of clinical features in Huntington's disease
- Identifying and developing novel clinical methods for tracking the clinical course of Huntington's disease

Professor Beth Armstrong

Foundation Chair in Speech Pathology
PhD

Professor Elizabeth Armstrong is Foundation Chair in Speech Pathology and heads an accredited undergraduate Speech Pathology program and a postgraduate research program. Professor Armstrong worked in the hospital sector as a clinician in Sydney before taking up an academic career, focusing on acute inpatient care and longer-term rehabilitation for people with communication disorders after stroke.

Professor Armstrong's research is primarily in the area of aphasia – language difficulty after stroke. Her work includes the application of Systemic Functional Linguistic theory, early intervention strategies, and issues related to brain injury in Australian Aboriginal populations. Her current projects funded by the NH&MRC involve a multi-centre randomised control trial of very early intervention for people with aphasia after stroke ("Very Early Rehabilitation of Speech - VERSE"), an exploration into communication disorders in Aboriginal peoples in Western Australia ("Missing Voices: An investigation into acquired communication disorders after stroke and traumatic brain injury in Indigenous Australians") and a clinical trial involving culturally secure rehabilitation services for Aboriginal brain injury survivors.

Professor Armstrong presents regularly at conferences, collaborates nationally and internationally, and has published widely in the area of aphasia. She currently leads two multidisciplinary teams with extensive community collaboration for research translation. She has built a strong collaborative team of Aboriginal and non-Aboriginal researchers focusing on this area within Australia.

Recent Publications

Journal Articles

- Armstrong, E., McKay, G. & Hersh, D. (2017). Assessment and treatment of aphasia in Aboriginal Australians: Linguistic and cultural issues. *Journal of Clinical Practice in Speech Language Pathology*, 19 (1), 27-34.
- Berg, K., Askim, T., Balandin, S., Armstrong, E., & Rise, M. B. (2017). Experiences of participation in goal setting for people with stroke-induced aphasia in Norway. A qualitative study. *Disability and Rehabilitation*, 39 (11), 1122-1130, DOI: 10.1080/09638288.2016.1185167.
- Armstrong, E., Ciccone, N. Hersh, D., Katzenellenbogen, J., Coffin, J., Thompson, S., Flicker, L., Hayward, C., Woods, D., & McAllister, M. (early online 2017). Development of the Aboriginal Communication Assessment after Brain Injury (ACAABI) - a screening tool for identifying acquired communication disorders in Aboriginal Australians. *International Journal of Speech Language Pathology*.
- Penn, C., & Armstrong, E. (2017). Inter-cultural aphasia: New models of understanding for Indigenous populations. *Aphasiology*, 31(5), 563-594.
- Godecke, E., Armstrong, B., Rai, T., Middleton, S., Ciccone, N., Whitworth, A., Rose, M., Holland, A., Ellery, F., Hankey, G., Cadilhac, D., Bernhardt, J., (2016), A randomized controlled trial of very early rehabilitation in speech after stroke. *International Journal of Stroke*, 11(5), 586-592, London, UK, DOI: 0.1177/1747493016641116.
- Berg, K., Rise, MB., Balandin, S., Armstrong, B., Askim, T., (2016), Speech pathologists' experience of involving people with stroke-induced aphasia in clinical decision making during rehabilitation. *Disability and Rehabilitation*, 38(9), 870-878, London, UK, DOI: 10.3109/09638288.2015.1066453.



Contact:

Email: b.armstrong@ecu.edu.au
Telephone: (61 8) 6304 2769

Research Interests:

- Aphasia
- Aphasia rehabilitation
- Linguistic applications to everyday discourse in aphasia
- Professional interactions
- Aboriginal health
- Aboriginal English

Associate Professor Erin Godecke

PhD, MSc, BSc, MA

We spend over half of our waking hours talking, texting, reading, writing, listening, understanding and interacting. It's not until we lose these functions that we realise how critical they are. Up to 30% of stroke survivors have aphasia – a communication impairment that negatively impacts speaking, understanding, reading and writing. Many of the 15,000 people each year with aphasia do not receive the specialist stroke care and communication therapy that is documented as evidence best practice and there is currently no mechanism to monitor or improve these services.

Associate Professor Erin Godecke, a Research Fellow at Edith Cowan University and Speech Pathologist at Sir Charles Gairdner Hospital has established a research program that is changing the face of clinical services for people with communication impairment following stroke and brain injury. Her work focusses on enhancing natural brain recovery processes through early, intensive speech and language rehabilitation and improving services for long term recovery. A/Prof Godecke's research includes two NHMRC funded studies investigating the clinical and health-economic effects of very early and chronic aphasia rehabilitation; the benefits and barriers to enriching communicatively enhanced hospital environments, mapping the relationship between areas of brain injury on clinical scans and early recovery; and improving therapy techniques in rehabilitation.

Recent Publications

Journal Articles

- Ferreira, D., Ciccone, N., Verheggen, A., Godecke, E., (2016), Speech pathology service delivery in the acute hospital setting. *Journal of Clinical Practice in Speech-Language Pathology*, 18(1), 19-22.
- Godecke, E., Armstrong, B., Rai, T., Middleton, S., Ciccone, N., Whitworth, A., Rose, M., Holland, A., Ellery, F., Hankey, G., Cadilhac, D., Bernhardt, J., (2016), A randomized controlled trial of very early rehabilitation in speech after stroke. *International Journal of Stroke*, 11(5), 586-592, London, UK, DOI: 10.1177/1747493016641116.
- Power, E., Thomas, E., Worrall, L., Rose, M., Togher, L., Nickels, L., Hersh, D., Godecke, E., O'Halloran, R., Lamont, S., O'Connor, C., Clarke, K., (2015), Development and validation of Australian aphasia rehabilitation best practice statements using the RAND/UCLA appropriateness method. *BMJ Open*, 5(7), Article no. e007641, London, UK, DOI: 10.1136/bmjopen-2015-007641.
- Ciccone, N., West, D., Cream, A., Cartwright, J., Rai, T., Granger, A., Hankey, G., Godecke, E., (2015), Constraint-induced aphasia therapy (CIAT): a randomised controlled trial in very early stroke rehabilitation. *Aphasiology*, 30(5), 566-584, DOI: 10.1080/02687038.2015.1071480.
- Godecke, E., Ciccone, N., Granger, A., Rai, T., West, D., Cream, A., Cartwright, J., Hankey, G., (2014), A comparison of aphasia therapy outcomes before and after a Very Early Rehabilitation programme following stroke. *International Journal of Language and Communication Disorders*, 49(2), 149-161, United Kingdom, DOI: 10.1111/1460-6984.12074.
- Hersh, D., Godecke, E., Armstrong, E., Ciccone, N., & Bernhardt, J. (2016). "Ward Talk": nurses' interaction with people with and without aphasia in the very early period post stroke. *Aphasiology*, 30/5, 609-628. <http://dx.doi.org/10.1080/02687038.2014.933520>



Contact:

Email: e.godecke@ecu.edu.au
Telephone: (61 8) 6304 5901

Research Interests:

- Very early aphasia recovery
- Outcomes in stroke care
- Impairment-based aphasia therapy

Associate Professor Natalie Ciccone

PhD, BSc

Associate Professor Ciccone's primary area of research interest is aphasia—a language disorder that occurs after stroke. She is currently involved in two NHMRC funded projects; a multi-centre randomised control trial of very early intervention for people with aphasia after stroke and an exploration into communication disorders after stroke and traumatic brain injury in Aboriginal peoples in Western Australia.

She has previously been involved in funded research projects including the evaluation of the cost effectiveness of early intensive aphasia therapy after stroke, evaluation of early multidisciplinary group intervention to improve communicative ability and psychosocial adjustment following traumatic brain injury and the investigation of speech pathologists' clinical decision making in the provision of services to people with aphasia.

Recent Publications

Journal Articles

- Armstrong, E., Ciccone, N., Hersh, D., Katzenellenbogen, J., Coffin, J., Thompson, S., Flicker, L., Hayward, C., Woods, D., & McAllister, M. (early online 2017). Development of the Aboriginal Communication Assessment after Brain Injury (ACAABI) - a screening tool for identifying acquired communication disorders in Aboriginal Australians. *International Journal of Speech Language Pathology*.
- Nang, C., Ciccone, N., (2016), Stuttering prognosis and predictive factors of treatment outcome: A review. *Journal of Clinical Practice in Speech-Language Pathology*, 18(2), 94-99, Melbourne, VIC.
- Godecke, E., Armstrong, B., Rai, T., Middleton, S., Ciccone, N., Whitworth, A., Rose, M., Holland, A., Ellery, F., Hankey, G., Cadilhac, D., Bernhardt, J., (2016), A randomized controlled trial of very early rehabilitation in speech after stroke. *International Journal of Stroke*, 11(5), 586-592, London, UK, DOI: 10.1177/1747493016641116.
- Katzenellenbogen, J., Atkins, E., Thompson, S., Hersh, D., Coffin, J., Flicker, L., Hayward, C., Ciccone, N., Woods, D., McAllister, M., Armstrong, B., (2016), Missing Voices: Profile and extent of acquired communication disorders in Aboriginal and non-Aboriginal adult stroke survivors in Western Australia using linked administrative records. *International Journal of Stroke*, 11(1), 103-116, DOI: 10.1177/1747493015607521.
- Ferreira, D., Ciccone, N., Verheggen, A., Godecke, E., (2016), Speech pathology service delivery in the acute hospital setting. *Journal of Clinical Practice in Speech-Language Pathology*, 18(1), 19-22.
- Hersh, D., Ciccone, N., (2016), Predicting potential for aphasia rehabilitation: The role of judgments of motivation. *Journal of Clinical Practice in Speech-Language Pathology*, 18(1), 3-7.
- Ciccone, N., West, D., Cream, A., Cartwright, J., Rai, T., Granger, A., Hankey, G., Godecke, E., (2015), Constraint-induced aphasia therapy (CIAT): a randomised controlled trial in very early stroke rehabilitation. *Aphasiology*, 30(5), 566-584, DOI: 10.1080/02687038.2015.1071480.
- Urbanowicz, A., Downs, J., Girdler, S., Ciccone, N., Leonard, H., (2015), Aspects of speech-language abilities are influenced by MECP2 mutation type in girls with Rett Syndrome. *American Journal of Medical Genetics*, 167(2), 354-362, United States, DOI: 10.1002/ajmg.a.36871.



Contact:

Email: n.ciccone@ecu.edu.au

Telephone: (61 8) 6304 2047

Research Interests:

- Neurogenic communication disorders
- Aphasia intervention
- Clinical decision making
- Communication difficulties after stroke in Indigenous Australians
- Use of discourse in the analysis and treatment of aphasia

Associate Professor Deborah Hersh

PhD, MSc, BSc

Associate Professor Deborah Hersh has over 25 years of clinical, research and teaching experience in Speech Pathology in the UK and Australia, and is a Fellow of Speech Pathology Australia (SPA). She has published and presented extensively in the areas of discharge from therapy, professional client relationships, clinical ethics, rehabilitation goal setting, and acquired communication disorder in Aboriginal Australians following stroke and brain injury. Deborah was an affiliate of the NHMRC CCRE Aphasia Rehabilitation and was involved in the development of the Australian Aphasia Rehabilitation Pathway (<http://www.aphasiapathway.com.au/>). She was also a member of the expert working party for the development of the National Stroke Foundation Clinical Guidelines (2010 and 2015) and contributed to their Enable Me website (<https://enableme.org.au/>). Deborah has served on the Editorial board of the Journal of Clinical Practice in Speech-Language Pathology, was a recent guest editor for Aphasiology, and was Chair of the Scientific Planning Committee for the 2016 National Conference. She has been a Chief Investigator on two NHMRC Project Grants, and is currently a CI on a NHMRC Partnership Grant. She supervises postgraduate research at Masters and PhD level and coordinates the Speech Pathology Honours programme at ECU.

Recent Publications

Book Chapters

- Sherratt, S., Worrall, L., Hersh, D., Howe, T. & Davidson, B. (2015). Goals and goal-setting for people with aphasia, their family members and clinicians. In: R.J. Siegert & W. Levack. (eds.) Rehabilitation Goal Setting: Theory, Practice and Evidence. CRC Press, Taylor & Francis. (pp.325-343)
- Hersh, D. & Armstrong, E. (2014). Grounded Theory in Speech-Language Pathology. In: Ball, M., Muller, N. & Nelson, R. (eds.) The Handbook of Qualitative Research in Communication Disorders: In Honor of Jack. S. Damico. Psychology Press. (pp.113-130).
- Hersh, D., Worrall, L., O'Halloran, R., Brown, K., Grohn, B. & Rodriguez, A. (2013). Assess for Success: Evidence for therapeutic assessment. In: N. Simmons-Mackie, J. King & D. Beukelman (Eds.) Supporting Communication for Adults with Acute and Chronic Aphasia. Brookes Publishing. (pp. 145-164).

Journal Articles

- Armstrong, E., Ciccone, N., Hersh, D., Katzenellenbogen, J., Coffin, J., Thompson, S., Flicker, L., Hayward, C., Woods, D., & McAllister, M. (2017). Development of the Aboriginal Communication Assessment after Brain Injury (ACAABI): a screening tool for identifying acquired communication disorders in Aboriginal Australians. *International Journal of Speech-Language Pathology*, 19(3), 297-308. doi.org/10.1080/17549507.2017.1290136
- Hersh, D. (2016). Therapy in transit: Managing aphasia in the early period post stroke. *Aphasiology*, 30/5,509-16.
- Hersh, D. & Ciccone, N. (2016). Predicting potential for aphasia rehabilitation: the role of judgments of motivation. *Journal of Clinical Practice in Speech-Language Pathology*, 18/1, 2-6.
- Hersh, D., Godecke, E. Armstrong, E., Ciccone, N., & Bernhardt, J. (2016). "Ward Talk": nurses' interaction with people with and without aphasia in the very early period post stroke. *Aphasiology* 30/5, 609-628.



Contact:

Email: d.hersh@ecu.edu.au
Telephone: (61 8) 6304 2563

Research Interests:

- Experiences of aphasia treatment termination for clients, families and clinicians
- Assessment and goal setting in aphasia rehabilitation
- Experiences for people with aphasia in acute care
- Group approaches for people with aphasia and families
- Social approaches and empowerment in aphasia
- Gaining informed consent from people with aphasia/ethical issues
- The therapeutic relationship and professional boundaries
- Qualitative research methodologies in speech pathology
- Experiences of acquired communication disorders for Aboriginal Australians after stroke and traumatic brain injury

Current Student Research Projects

Our HDR students carry out projects at Doctorate and Masters level in a number of areas. Below is a list of some of the projects that are currently being undertaken in our school.

Doctor of Philosophy

Thesis Title	Principal Supervisor
Does direct helicopter retrieval improve survival for severely injured trauma patients from rural locations?	Prof Russell Jones
Impact of dairy lipid intake on gut microbiota, and its association with cardiovascular related metabolites in Australian children	Prof Amanda Devine
What motivates and supports primary teachers to teach nutrition	Prof Amanda Devine
Treatment fidelity in very early rehabilitation in speech (VERSE): What works in aphasia therapy?	A/Prof Natalie Ciccone
Effects of internal and external cooling on sudo- and vasomotor adaptations during heat acclimation	A/Prof Christopher Abbiss
The effect of unilateral resistance training on neuromuscular function and adaptation in the trained and untrained elbow flexors	A/Prof Guy Haff
Monitoring neuromuscular fatigue and athlete readiness using a non-invasive test battery	A/Prof Sophia Nimphius
Proprioception and performance in surfing	A/Prof Sophia Nimphius
An assessment of risks associated with the use of water misting systems as a cooling intervention in public places in the Pilbara region of Western Australia	A/Prof Sue Reed
Quantifying the heterogeneity of the immunoglobulin G glycome in an ageing Australian population: The Busselton health ageing study	Prof Wei Wang
Involvement of toxoplasma gondii and inflammatory markers in the pathogenesis of Type 2 Diabetes Mellitus	Prof Wei Wang
Utility of novel CSF biomarkers for the early diagnosis, prognosis and assessment of cognition decline in Alzheimer's Disease	Dr Veer Bala Gupta
Synergistic efficacy of selected nutraceuticals as therapeutic strategies for Alzheimer's Disease	Dr Veer Bala Gupta
ABCB5 transporter: potential mediator of intrinsic resistance in melanoma	Dr Elin Gray
Exploring frequency entrainment in coupled oscillator systems: A novel approach to human-machine interactions during locomotion	Dr James Croft
Exploring talent identification in combat sports: Using the coaches' eye to forecast talent	A/Prof Annette Raynor
Understanding the mechanisms of fatigue in the recovery from dehydration in combat athletes	A/Prof Christopher Abbiss
The effect of post-exercise water immersion on muscular performance in athletes	A/Prof Guy Haff
Investigating communication enhanced environments after stroke	Prof Elizabeth Armstrong
A series of studies investigating gender differences in strength characteristics and performance of competitive surfers	A/Prof Sophia Nimphius
Biomechanical characteristics of aerial surfing	A/Prof Sophia Nimphius

Thesis Title	Principal Supervisor
Manifestations of fatigue in boxing: Investigating the role of soft-tissue vibration	Prof Anthony Blazeovich
The economic impact of exercise in managing the side effects of androgen deprivation therapy as a treatment for prostate cancer	Prof Robert Newton
Acute and chronic and physiological effects of interval eccentric cycling	Prof Kazunori Nosaka
Effect of neuromuscular electrical stimulation muscle strength training on muscle force and mass, physical health and quality of life in people with a spinal cord injury	Prof Anthony Blazeovich
Effects and management of nocturnal body temperature in children with Cerebral Palsy	A/Prof Christopher Abbiss
An assessment of nurses' experiences of work related stress through self-reporting and hair cortisol analysis, in a typical metropolitan hospital setting in Western Australia	A/Prof Jacques Oosthuizen
Impact of climate change on public health: Adaption strategies to heat stress by outdoor informal sector workers in urban Bulawayo - Zimbabwe	A/Prof Jacques Oosthuizen
Identifying and validating novel genetic variants and their functional implications in Alzheimer's Disease.	A/Prof Simon Laws
The mechanics of front leg loading during cricket fast bowling: Delivery variations, spell demands, and the effect of strength training	A/Prof Sophia Nimphius
Influence of muscle strength and its changes with heavy eccentric strength training on performance in high-level sprint kayakers	Prof Anthony Blazeovich
The identification of serological autoantibody biomarkers for the early diagnosis of Cutaneous Melanoma	Prof Melanie Ziman
The application of various modelling for the quantification of external load in football	Prof Anthony Blazeovich
The influence of facial physiognomy on the composition and promotion of an occupational safety and health message	A/Prof Jacques Oosthuizen
Fostering positive body image among young children: Development and evaluation of an online professional development resource for early childhood educators	A/Prof Shelley Beatty
Blood based biomarkers: Prognostic tools for melanoma recurrence	Prof Melanie Ziman
A series of studies investigating the use of post activation potentiation during complex training to enhance strength and power	Prof Robert Newton
Quantifying changes of direction using microtechnology for load management and injury prevention in elite Australian football	Prof Robert Newton
Online holistic health discourse: Shaping lay representations of health and the body	Dr Leesa Costello
The performance analysis of power output in professional male road cyclists	A/Prof Christopher Abbiss
Influences on the academic success of women nursing students in established relationships	Dr Leesa Costello
Breathing new life: Investigating ways to improve the mental health of people living with chronic obstructive pulmonary disease in Western Australia	Prof Melanie Ziman
Nutrition and body composition in pleural malignancies: Effects on patient outcomes and response to an exercise intervention	Prof Robert Newton
Heavy metal ash concentrations from prescribed burns in open jarrah forests along the Darling scarp adjacent to the Perth Metropolitan Area.	A/Prof Jacques Oosthuizen
The effects of velocity-based training on fatigue, strength and power	A/Prof Guy Haff
Effects of exercise intensity and cognitive load on acute changes in attention and vigilance	Prof Kazunori Nosaka

Thesis Title	Principal Supervisor
The effect of bilateral and unilateral resistance training on functional athletic performance	Prof Robert Newton
Developing sporting expertise in elite junior soccer players	A/Prof Annette Raynor
Beyond jump height: Predicting anatomical, mechanical and neuromuscular characteristics during the vertical jump	Prof Anthony Blazeovich
Validation of N-Glycan profiles as a risk stratification biomarker for Type II Diabetes Mellitus and metabolic relation risk factors	Prof Wei Wang
Heat exposure and endurance athletes: Can you have too much of a good thing?	A/Prof Christopher Abbiss
The effect of recreational football (soccer) games on physical, physiological and mental health outcomes in children with Cerebral Palsy	Prof Robert Newton
Developing a web-based training package for clinical dietitians to enhance adoption of the Nutrition Care Process (NCP)	Prof Amanda Devine
Reliability of Peripheral Quantitative Computed Tomography (PQCT), reliability of osteogenic index, and a thirty-six week upper body resistance training study measuring osteogenic adaptations.	Dr Nicolas Hart
Responses of the cortico-spino-motoneuronal pathway to acute passive muscle stretching, and their contribution to stretch-induced force loss	Prof Anthony Blazeovich
Comparing effects of an isocaloric low-fat vs mediterranean diet on hepatic steatosis and cardio-vascular risk factors in patients with Non-Alcoholic Fatty Liver Disease (NAFLD)	Dr Therese O'Sullivan
Analysis of perceptual-motor calibration in indoor climbing	Dr James Croft
Health impacts and dietary composition of the paleolithic and Australian guide to healthy eating diets in australia	Prof Amanda Devine
Studying post-translational modifications - a novel approach to blood-based protein biomarkers for Alzheimer's Disease	Dr Veer Bala Gupta
The effect of offender registration, within the terms of the community protection (offender reporting) act (2004), upon the physical, mental and social wellbeing of reportable offenders	Prof Moira Sim
An evaluation of heat exposures and heat adaptation strategies among older residents of Victoria Park	A/Prof Jacques Oosthuizen
Evaluation of acceptance and efficiency of exercise for Indigenous Australians to benefit physiological, anthropometric and metabolic syndrome outcomes	Prof Robert Newton
The effect of testosterone and docosahexaenoic acid (DHA) supplementation on blood biomarkers associated with Alzheimer's Disease	Prof Ralph Martins
Development of a prehospital advanced life support course	Prof Russell Jones
The use of bloodmarkers to measure the effect of multidisciplinary therapy on hypothalamic function in premanifest Huntington's Disease individuals	Prof Melanie Ziman
Impact of augmented feedback on pacing and performance in striking combat sports	A/Prof Christopher Abbiss
Beliefs, attitudes and behaviours of parents and grandparents in relation to breastfeeding and immunisation	Dr David Coall
Food insecurity and fruit and vegetable consumption among regional and remote Western Australian children: Determinants, prevalence and predictors	Prof Amanda Devine
Strength and power profiling of track sprint cyclists	A/Prof Christopher Abbiss
Modeling medulloblastoma development by genetic manipulation of normal human neural stem cells	Prof Melanie Ziman

Thesis Title	Principal Supervisor
Exploring the preparedness of novice paramedics for the mental health challenges of the paramedic profession. Using the wisdom of the elders	Prof Russell Jones
Food provision in early years' settings requires a cohesive multi strategy approach to initiate systematic change to optimise nutrition in the Early Childhood Education and Care (ECEC) Sector.	Prof Amanda Devine
Association of fat intake and gut health in children	Prof Amanda Devine
An investigation of the associated factors and the development of a measurement instrument of food insecurity in Western Australia	Prof Amanda Devine
What motivates and supports primary school teachers to teach nutrition?	Prof Amanda Devine
Developing a web-based training package for clinical dietitians to enhance adoption of the Nutrition Care Process (NCP)	Prof Amanda Devine
Ambulance-based bioevent detection: an assessment of syndromic surveillance systems in Australian ambulance services	Prof Russell Jones
Informing bushfire fighting strategies through quantified fire engineering	Prof Russell Jones
The incidence and effects of illicit drugs and alcohol with regard to ambulance call-outs	Prof Russell Jones

Master of Science (Human Biology)

Thesis Title	Principal Supervisor
Genetic markers in circulating tumour cells as a measure of the metastatic propensity of Uveal Melanoma	Dr Elin Gray
Structure and function of placentae in Assisted Reproductive Technology (ART) and non assisted conceptions: The role of mate prenatal stress	Dr David Coall
A longitudinal study of recollections of parental bonding: An evolutionary analysis	Dr David Coall
Isolation and identification of circulating melanoma cells	Prof Melanie Ziman
Embryo selection for vitrification, thawing and transfer in an IVF programme	A/Prof Peter Roberts
Morning sickness and the placenta	Dr David Coall

Master of Public Health

Thesis Title	Principal Supervisor
Development of the meal framework: A multiliteracies approach to engaging adolescents in nutrition education	Prof Amanda Devine
Mindfulness at work	A/Prof Jacques Oosthuizen
Investigating the practice and capacity of paediatric occupational therapists to promote the physical activity levels of Western Australian children	Dr Julie Dare
Does resistant starch and psyllium provided to people with Irritable Bowel Syndrome on thewho are consuming a low FODMAP diet will improve their gut health/ microbiome?	Prof Amanda Devine

Master of Paramedical Science by Research

Thesis Title	Principal Supervisor
Prevalence of pre-hospital presentations of persons with an underlying diagnosis of Intellectual Disability and the confidence and appropriateness of training of paramedics to manage these patients	Prof Russell Jones
The comparability of Australian paramedic and registered nurse skills, knowledge and attributes with current requirements of the International Humanitarian Aid (IHA) community	Prof Russell Jones
Dynamic risk management in fire and rescue emergency operations	Prof Russell Jones

Master of Science (Sport Science)

Thesis Title	Principal Supervisor
The acute effects of a single strength training session on motor neurone excitability and facilitation systems	Prof Anthony Blazeovich
The efficacy of using an auto-regulated resistance-training intensity and its effect on strength, power and select markers of athletic performance	A/Prof Guy Haff
Effect of 60-min incongruent stroop task on 2000-m rowing performance	Prof Kazunori Nosaka
Physiological and disease-specific characteristics of gynaecological cancer survivors	Prof Robert Newton
Relationship of leg extensor force production to the swim turn: Transference of dry land strength and power training to in-water performance.	Prof Robert Newton
Characteristics of goal scoring opportunities during the 2016 AFL premiership season	Dr Fadi Ma'ayah
Analysis of goal scoring opportunities at the Women's World Cup 2015 & a case study of the top four men's and women's international teams	Dr Fadi Ma'ayah
Feasibility and efficacy of a 3 month progressive exercise program in patients with nash related cirrhosis	Prof Robert Newton
The effect of maximal isometric training on rate of force development during voluntary and catch-inducing' muscle stimulations tests	Prof Anthony Blazeovich
Determinants of a successful short serve in badminton	Dr Jodie Cochrane Wilkie
Comparison in muscle activity between the back squat, romanian deadlift and barbell hip thrust during hip extension	Prof Kazunori Nosaka

Master of Science (Medical Science)

Thesis Title	Principal Supervisor
The cryopreservation of human semen, and subsequent evaluation of two commercially-available devices to isolate motile sperm	A/Prof Peter Roberts
Factors associated with anxiety, depression, and PTSD symptomatology in Australian paramedics	Prof Russell Jones
Sperm DNA integrity testing and assisted reproductive technology (ART) outcomes	A/Prof Peter Roberts

Contact ECU by
phone on 134 328

For calls outside Australia
phone (61 8) 6304 0000

Email us at
futurestudy@ecu.edu.au
or visit ecugetready.com.au

GREENING ECU: Edith Cowan University is committed to reducing the environmental impact associated with its operations by conducting its activities in a socially and environmentally responsible manner. This includes implementing strategies and technologies that minimise waste of resources and demonstrate environmentally sensitive development, innovation and continuous improvement.

DISCLAIMER: Every effort has been made to ensure that the information contained in this publication is correct at the time of production. The information is subject to change from time to time and the University reserves the right to add, vary or discontinue courses and impose limitations on enrolment in any course. The publication constitutes an expression of intent and is not to be taken as a firm offer or understanding.