



2023 Faculty of Medicine Winter Research Projects

Read about the winter research program on the <https://employability.uq.edu.au/summer-winter-research> webpage, and apply online from 20 March and close at 11:59pm, 16 April 2023 via <https://employability.uq.edu.au/summer-winter-research/apply>

Projects are listed under the organisational unit names on the application page (StudentHub). Additional projects may be uploaded over the coming weeks so please check which version you download. (*Most recent update: 16 March 2023*).

Centre for Health Services Research

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Frazer Institute

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Centre for Health Services Research

Project 1 title:	Trends in socioeconomic inequalities in disability among Australian adults, 2011-2020
Hours of engagement & delivery mode	For the Winter program, students will be engaged for 4 weeks only. Hours of engagement must be between 20 – 36 hrs per week. The project will be offered on-site UQ Health Sciences Building, Herston
Description:	<p>Background</p> <p>Nearly 15% of the world population have some form of disability. Similarly, over one-fourth of Australian adults are living with disability. Despite the high prevalence of disability in Australia, there is a dearth of information about socioeconomic inequality in disability acquisition in Australia. This study aims to examine the socioeconomic inequality that exists in the prevalence of disability among Australian adults.</p> <p>Methods</p> <p>We utilized 10 most recent waves (waves 11 through 20) of the nationally-representative Household, Income, and Labour Dynamics in Australia (HILDA) survey data. We applied Erreygers concentration index, concentration curve, and multivariate logistic regression to measure socio-economic inequality in disability. The proportion of disabled adults was assessed in relation to equivalised household annual disposable income. Results: We found statistically significant negative concentration index (Index value: -.235, p-value: <0.001), which indicate that socio-economic inequality exist in disability acquisition in Australia. We also found evidence that disability is highly concentrated in socio-economically poor adults over the last ten years (concentration index value ranges from -0.229 [2017] to -0.255 [2020]). We revealed that obesity (OR: 1.84, 95% CI: 1.79-1.91), serious injury (OR: 3.77, 95% CI: 3.62-3.93), and physical violence (OR: 1.63, 95% CI: 1.47-1.80) are statistically significant risk factors of acquiring disability.</p> <p>Conclusion</p> <p>We found evidence that disability is highly concentrated among the poorer section of the Australian society. This finding has important policy implications. Policy makers should devise and implement strategies to eliminate the onset of disabilities wherever possible.</p>
Expected outcomes and deliverables:	The scholar will learn data management skills as well as econometric analysis experience. The scholar will produce a manuscript for publication in a top-quartile journal (Q1) under the supervision of the supervisor.
Suitable for:	This project is open to applications from students with a background in health economics, public health, or health sciences.
Primary Supervisor:	Dr Syed Afroz Keramat s.keramat@uq.edu.au
Further info:	The supervisor MUST be contacted by students prior to submission of an application

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Project 2 title:	Core Outcomes in Frail Inpatients
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Hours of engagement & delivery mode	For the Winter program, students will be engaged for 4 weeks only. Hours of engagement will be 21 hours per week. The project will be offered remotely.
Description:	Management decisions in frail hospital patients often require trade-offs at an individual level: potential benefits of an intervention must be weighed against risk of adverse outcomes. However, it is unclear what outcomes are of critical importance to frail patients, their carers and their clinicians. This project will involve contributing to a Core Outcome Set for frailty in acute settings. Specifically, the project will involve a systematic review of the literature, qualitative semi-structured interviews and an international online survey. The student will be contributing to these activities based on the stage of the project when placement commences (e.g., reviewing articles as part of the systematic review, transcribing and analysing interview data, designing the survey).
Expected outcomes and deliverables:	Scholars may gain skills in: Systematically searching and reviewing academic literature; Data management; Academic writing (e.g., reports, articles, protocols); Analysing qualitative data; Content mapping; Co-design and module design; online module building; Participating in team meetings (can be via Zoom). Relevant training will be provided by supervisors.
Suitable for:	This project is suitable for students with a background in medicine/nursing, psychology, allied health, or public health. It would be beneficial for students considering a PhD.
Primary Supervisor:	Dr Kristiana Ludlow k.ludlow@uq.edu.au
Further info:	The supervisor CAN be contacted by students prior to submission of an application.

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Frazer Institute

Project 3 title:	Genetic Profiling of Primary Breast Diffuse Large B Cell Lymphoma
Hours of engagement & delivery mode	For the Winter program, students will be engaged for 4 weeks only. Hours of engagement must be between 20 – 36 hrs per week. The project will be offered on-site, Translational Research Institute, Woolloongabba
Description:	Background Primary Breast lymphoma (PBL) is a form of non-Hodgkin lymphomas (NHL) which accounts 1% of all NHLs and between 0.04-0.5% of all breast tumour malignancies. PBL are typically categorised as diffuse large B cell lymphoma (DLBCL) and can result from an extra-nodal manifestation of systematic disease or as a primary breast tumour. The diagnosis of PBL often more challenging as compared with breast carcinomas as imaging is inadequate for diagnosis. Unlike other breast malignancies PBL is cannot be treated with surgical intervention, relying on combined chemotherapy and radiotherapy. Currently, molecular features of PBL are inconclusive due to small cohort sizes and a lack of a long-term follow-up. Lastly, PBL has also been linked with higher incidences of other rare lymphomas including primary central nervous system DLBCL. Possible due to shared non-germinal centre B cell (non-GCB) phenotype and the mutated MYD88/CD79B (MCD) genotype.



	<p>Methods</p> <p>Nanostring nCounter enables for direct profiling of individual molecules multiplexed up to 800 genes within a single reaction without the need for amplification. In addition, nCounter is superior for formalin-fixed, paraffin-embedded tissues. For this project the Nanostring PanCancer Immune Profiling Panel will be utilised which allows for 770 genes across 3 functional categories (Identification of 24 different infiltrating immune cell types, assessment of immunological function and Identification of tumour-specific antigens) to be quantitated.</p>
Expected outcomes and deliverables:	Scholars gain skills specific wet laboratory tasks including RNA extraction, probe hybridisation and operation of the nCounter system (prep station and Digital Analyser), scholars will also gain skills in bioinformatics to analyse the nCounter output data.
Suitable for:	This project is open to applications from students with a background in biochemistry or biomedical sciences or 3rd & 4th year students only or students considering a PhD.
Primary Supervisor:	Dr. Colm Keane c.keane@uq.edu.au
Further info:	The supervisor CAN be contacted by students prior to submission of an application

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School of Biomedical Sciences

Project 4 title:	Analysis of cortical phenotypes in NSD1-deficient mice
Hours of engagement & delivery mode	For the Winter program, students will be engaged for 4 weeks only. Hours of engagement will be 36 hrs per week. The project will be offered on-site, UQ St Lucia Campus
Description:	Here, we aim to understand the role of the histone methyltransferase, NSD1, in cortical development and function. Heterozygous mutations to this gene in humans gives rise to an overgrowth syndrome called Sotos syndrome, but our understanding of how this factor regulates brain development is incomplete. Here, we will study the role of NSD1 using transgenic mice that are either heterozygous or homozygous for this gene. The ultimate goal of this work is to understand how NSD1 shapes brain development and function, work that is critical is we are to develop diagnostic and treatment options for Sotos syndrome patients.
Expected outcomes and deliverables:	The student will be under the guidance of two experienced HDR students. The student will learn a key range of techniques, including: dissection, PCR, histology, imaging and data analysis. It will also give them experience of what life is like in lab.
Suitable for:	Suitable for students considering Honours and eventually a PhD
Primary Supervisor:	Prof. Michael Piper m.piper@uq.edu.au
Further info:	The supervisor MUST be contacted by students prior to submission of an application.

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Project 5 title:	Developing novel therapies for cancer treatment
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Hours of engagement & delivery mode	For the Winter program, students will be engaged for 4 weeks only. Hours of engagement will be 36 hours per week. The project will be offered on-site, UQ St Lucia Campus
Description:	We are interested in developing novel nano-therapeutic methods to better treat ovarian cancer. Ovarian cancer is the most deadly type of gynaecologic disease with more than 1500 new cases being diagnosed each year in Australia. The high recurrence rate is a major challenge in the clinical management of high grade serous ovarian cancer. While stimulating our own immune system to recognize and attack tumour cells represents an attractive means to facilitate complete elimination of tumours, emerging data suggest that many of the immunotherapy tools, such as immune checkpoint inhibitors, are minimally active in ovarian cancer. We aim to develop novel approaches to overcome this problem and to also disrupt the cross talk between cancer and stromal cells in tumours. Ultimately, strategies developed in this project could significantly increase the survival of patients with ovarian cancer.
Expected outcomes and deliverables:	The student will learn critical laboratory skills and knowledge needed to develop new strategies to treat cancer. The student will gain experience in working in a multidisciplinary environment and contribute to an exciting project in cancer nanomedicine.
Suitable for:	This project is open to applications from students with a background in biomedical sciences, pharmacy, or biomedical engineering, who is interested in exploring research as a career path.
Primary Supervisor:	Dr Sherry Wu sherry.wu@uq.edu.au
Further info:	The supervisor MUST be contacted by students prior to submission of an application.

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Project 6 title:	Curating an Exhibition
Hours of engagement & delivery mode	For the Winter program, students will be engaged for 4 weeks only. Hours of engagement will be 25 hours per week. The project will be offered on-site, UQ St Lucia Campus
Description:	<p>Overall, this project will combine medical and historical research with the collection of the Integrated Pathology Learning Centre (IPLC) in order to produce a small exhibition. During this project there will be three stages. Each stage is designed to mirror the four weeks dedicated to the project. This is except for stage 2 that will be a two-week workload.</p> <p>Stage 1: The successful applicant will select a pot or multiple pots in the IPLC revolving around a central theme or topic. Stage 2: Medical and historical research “finding stories and narratives surrounding the disease that can be turned into an exhibition. Stage 3: Designing the panels and labels for the exhibition based on the research.</p> <p>As the exhibition will be mounted in a small moveable display case, these stages are achievable in a four-week timeframe.</p>
Expected outcomes and deliverables:	Applicants will gain skills in research, communication, and also some insight into exhibition development. The deliverable for this project is exhibition labels. If time allows, the exhibition will also be installed.



Suitable for:	I am looking for an applicant with an interest in historical research who is hoping to expand their skills in both research and communication.
Primary Supervisor:	Ms Rebecca Lush r.lush@uq.edu.au
Further info:	The supervisor CAN be contacted by students prior to submission of an application.

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Project 7 title:	Using advanced electromyography techniques to study spinal cord reflexes in humans
Hours of engagement & delivery mode	For the Winter program, students will be engaged for 4 weeks only. Hours of engagement will be 30 hours per week. The project will be offered on-site, UQ St Lucia Campus
Description:	Our brain and spinal cord work in harmony to control our muscles. In the spinal cord, motor units combine inputs from the brain and sensory feedback to generate muscle force. Our research team is trying to understand more about how motor units control movement in humans. We will be using a technique called high-density surface EMG (HDsEMG) to do so. For HDsEMG recordings, a multi-channel surface sensor is applied on the skin overlying the calf muscles. This sensor samples naturally produced electrical activity arising from muscle contraction. We will also use electrical stimulation to activate the nerves innervating the calf muscles to see how reflexes affect HDsEMG measures of muscle activity. Healthy adult participants will be recruited and invited to attend a lab-based testing session where these methods will be used. The information gained in this study will improve our understanding of how motor units function. It may also lead to the development of novel rehabilitation strategies for individuals with movement problems (e.g., spinal cord injury and stroke).
Expected outcomes and deliverables:	As a winter research project student, you will assist with the data collection for this project and can learn some cutting-edge neurophysiology techniques! Importantly, this project will give you a taste of lab-based research involving human subjects, which may be more appealing to those that might not be interested in wet lab and benchtop science. We expect that some of this work will eventually lead to a publication, and at the end of the project, you will be expected to deliver a brief presentation highlighting your experiences to peers and supervisors.
Suitable for:	This project is most suitable for students with a background in Biomedical Science, Science, Exercise Science/Physiology or Biomedical Engineering.
Primary Supervisor:	Dr Jacob Thorstensen j.thorstensen@uq.edu.au
Further info:	The supervisor CAN be contacted by students prior to submission of an application.

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Project 8 title:	Investigating the association of dopamine loss on sleep in a mouse model of Parkinson's disease.
Hours of engagement & delivery mode	For the Winter program, students will be engaged for 4 weeks only. Hours of engagement will be 36 hours per week. The project will be offered on-site, UQ St Lucia Campus



Description:	The project aims to characterize the changes in sleep parameters associated with the degeneration of dopaminergic neurons of the substantia nigra. For this purpose, we will use a transgenic mouse model of human synucleinopathies that develops motor and non-motor impairments due to the accumulation of pathological α -synuclein.
Expected outcomes and deliverables:	The applicant will gain the unique opportunity to learn sleep scoring in rodent (murine) models in health and disease and utilize state-of-the-art electrophysiological techniques to identify early disease biomarkers. Furthermore, the successful candidate will help investigate the underlying pathologies using different biochemical and molecular techniques. The aim is for the student to generate two missing figures for a manuscript that is in an advanced stage of development. The student will present the data in the format of a presentation at the end of the project and will be provided with a peer review.
Suitable for:	This project is open to applications from students with a background in biomedical sciences and neuroscience. Student considering a PhD are strongly encouraged to apply.
Primary Supervisor:	Dr Oliver Rawashdeh o.rawashdeh@uq.edu.au
Further info:	The supervisor CAN be contacted by students prior to submission of an application.

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Project 9 title:	A genetic model of Spinocerebellar ataxia type-5 (SCA5).
Hours of engagement & delivery mode	For the Winter program, students will be engaged for 4 weeks only. Hours of engagement will be 36 hours per week. The project will be offered on-site, UQ St Lucia Campus
Description:	<p>Our brains contain billions of cells, known as neurons, which communicate via electrical signals sent through long cable-like structures called axons. Just like the electrical cables in our homes, axons need to be protected and maintained to work. At only 1/50th the width of a human hair, axons are particularly vulnerable to damage that can lead to their destruction and the loss of these connections, with devastating consequences for the brain. Our research is aimed at answering two of the deepest and most general of biological questions: how are these axons kept intact despite the barrage of insults they receive during healthy aging, and what can we do to protect them when injuries or diseases strike?</p> <p>One way that axons are thought to be protected from physical force is due to a scaffold within them that forms a series nanoscopic trusses and beams providing strength and elasticity. These structures contain a highly abundant molecule called spectrin. Mutations in components of the spectrin cytoskeleton are associated with a range of human neurological disorders and mutations in human β-III-Spectrin causes spinocerebellar ataxia type 5. How pathogenic variants give rise to the severe neurological deficits of SCA5 is not well understood.</p> <p>This project will use a microscopic roundworm, <i>C. elegans</i>, as a discovery platform to uncover the cellular mechanisms disrupted in SCA5 to understand how this causes the neurological defects seen in patients. This project will test the function of human β-III-Spectrin in the worm by generating humanised β-Spectrin in <i>C. elegans</i> using use state-of-the-art</p>



	genome engineering strategies. This will allow us to test the functional conservation in vivo, as well as address cell specific function and localisation using sophisticated molecular genetics and confocal microscopy.
Expected outcomes and deliverables:	The successful applicant can expect to learn molecular cloning techniques, PCR, C. elegans handling and microscopy experience. They will be expected to deliver high-quality data and present an oral presentation at the end of their project in lab meeting.
Suitable for:	This project would be suitable for applicants with a background or interest in developmental biology, neuroscience, or cell biology. Curious and highly motivated individuals considering honours or a PhD in the future would be encouraged to apply.
Primary Supervisor:	Dr Sean Coakley s.coakley@uq.edu.au
Further info:	The supervisor MUST be contacted by students prior to submission of an application.

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Project 10 title:	Embedding art in histology classes: Visual Thinking Strategies (VTS) to enhance learning and visual literacy.
Hours of engagement & delivery mode	For the Winter program, students will be engaged for 4 weeks only. Hours of engagement will be between 20-25 hours per week. The project will be offered on-site, UQ St Lucia Campus
Description:	<p>Histology is a foundational yet challenging subject for biomedical students. It is visually demanding, requiring heightened observational skills by students to identify unique cell morphology characteristics that vary with the orientation, location, shape and size of each specimen. Interpretation of histological sections is particularly difficult for novice students, as the cell arrangement and structure of tissues appears very different to how they are typically portrayed in diagrammatic form in textbooks and lectures! Given the highly visual nature of this subject, there are similarities to the viewing and interpretation of art that can be drawn.</p> <p>Visual Thinking Strategies (VTS) was developed 30 years ago as a pedagogical tool that uses art to teach thinking, communication skills and visual literacy. It has been used in higher education teaching in disciplines as diverse as medicine, nursing, midwifery, art history, visual arts, business and law. This project will explore the potential for VTS to improve learning and engagement in students new to the study of histology within a biomedical science program. The VTS protocol uses facilitated group discussion of an art image to encourage thoughtful perception, allow students to put their observations and thoughts into words, and build off the ideas of others. This intervention has been trialled in a 3rd-year histology class in BIOM3020 (Integrated Endocrinology) in 2021 and 2022, in conjunction with an experienced VTS facilitator from the UQ Art Museum. In particular, this winter project will focus on analysis of open-ended meta-learning reflections by students in 2022 on whether VTS changed their perception of the study of histology. This will be done via inductive thematic analysis methodology and nVivo software.</p>

Expected outcomes and deliverables:	<p>This project will build on a previous Honours project that analysed qualitative and quantitative data collected from a VTS intervention in 2021. While there was no significant effect of the VTS activity on the students' academic performance, 46% of students reported that VTS changed how they viewed histological images and improved their observational skills. This study suggested that a one-off VTS activity at the beginning of a histology class can benefit students' experience of unfamiliar microscopic images and improve enjoyment of this challenging subject.</p> <p>Based on this study and feedback from students, changes were made to the methodology and the intervention was repeated with a different cohort of students in 2022. This winter project will analyse the reflection responses from students, comparing and contrasting them with the original intervention. Results from this study will be presented at the Australian Conference on Science and Mathematics Education in September, and will be combined with the 2021 analysis for a publication to be submitted to Anatomical Sciences Education. This project will ultimately contribute to innovations in pedagogical practice associated with histology education at UQ.</p>
Suitable for:	This project would suit pre-medical provisional students or other undergraduates with an interest in research that does not include wet-lab experience. This project involves qualitative and quantitative research methods. An interest in biomedical education would also be an advantage.
Primary Supervisor:	Dr Lisa Akison l.akison@uq.edu.au
Further info:	The supervisor MUST be contacted by students prior to submission of an application.

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Project 11 title:	Image-Processing - Comparative Functional Anatomy & Evolution of Predatory and Non-Predatory Bird Claws (PART II)
Hours of engagement & delivery mode	For the Winter program, students will be engaged for 4 weeks only. Hours of engagement will be between 20-36 hours per week. The project will be offered on-site, UQ St Lucia Campus
Description:	A large collection of photographs of predatory and non-predatory bird claws (museum specimens) need image-processing for comparative functional morphological analysis, where this data will be compared against that of predatory bird claws (arising from part I of this project). Image processing involves markup of morphological margins and landmarks, and application of geometries to obtain key morphometrics. Software involved will be Rhino & Grasshopper, include possibly also use Photoshop, illustrator (so some experience and proficiency in these, and general artistic skills is very desirable) and RStudio(Posit) for any analysis involved. There are thousands of photographs of hundreds of diverse species of carnivorous birds from several museums around the world (including owls, hawks, vultures) etc., so volume of work will be staged and depend on progress speed and quality (which will be checked along the way). This is an exciting project with several papers are planned for the resultant claw morphometric data relating to the evolution and adaptation of claw "sharpness", "robustness" and curvature with prey type, habitat use and arboreal vs terrestrial locomotion with comparisons to non-



	predatory birds and dinosaur ancestors. It is intended to provide the student with access to journal club shared with Carl Stephan (skeletal morphometrics for forensics & 2D-3D imaging techniques) If the student shows initiative and promise further research work directly related to this, or other human related musculoskeletal research will be considered.
Expected outcomes and deliverables:	A series of papers on function of predatory and non-predatory bird claws in feeding, foraging and locomotion, which shines a light on evolution of claw function in non-avian dinosaur ancestors as flight was evolving.
Suitable for:	2nd-3rd year anatomy or zoology student, with artistic skills, and experience with Photoshop and possible Rstudio.
Primary Supervisor:	Mr Chris Glen c.glen@uq.edu.au
Further info:	The supervisor MUST be contacted by students prior to submission of an application.

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School of Public Health

Project 12 title:	Incidence and Mortality of CVD in Women with Breast Cancer
Hours of engagement & delivery mode	For the Winter program, students will be engaged for 4 weeks only. Hours of engagement must be between 30 – 36 hrs per week. The project will be offered on-site, School of Public Health, Herston
Description:	Breast cancer patients often receive life saving but cardiotoxic cancer treatments, such as anthracycline chemotherapy. To better understand the extent of this risk, our team have conducted a systematic review and meta analysis of the incidence, mortality and survival of cardiovascular disease in women diagnosed with breast cancer. We are looking for a highly motivated and well organised student to work with us over the four week winter period to update our database search and using a pre-defined eligibility criteria assess studies for inclusion in our review.
Expected outcomes and deliverables:	1) how to build & run a search strategy in multiple health & medical literature databases, 2) how to build a comprehensive review eligibility criteria using current guidelines, and 3) what processes to follow to rigorously assess eligibility of studies.
Suitable for:	- undergraduate student in health sciences, public health, or related courses - students considering a postgraduate or HDR degree would benefit from this experience and learning opportunity. - Students who are willing to work within the FNCWR team at Herston during the duration of their scholarship and attend two FNCWR cardio-oncology research team meetings
Primary Supervisor:	Prof Marina Reeves marina.reeves@uq.edu.au
Secondary contact if not the supervisor	Dr Abbey Diaz abbey.diaz@uq.edu.au



Further info:	The supervisor MUST be contacted by students prior to submission of an application.
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Project 13 title:	Use of machine learning techniques to identify vaccine combinations at risk of producing adverse events
Hours of engagement & delivery mode	For the Winter program, students will be engaged for 4 weeks only. Hours of engagement must be between 36 hrs per week. The project will be offered on-site, School of Public Health, Herston
Description:	In travel medicine, patients often receive multiple vaccines (e.g., rabies, hepatitis A, and DPT) at once during pre-travel consultations. The evidence on safety profile of combination of vaccines is sparse and inconclusive, due to limitations of ‘traditional’ epidemiological methods to analyse the data. Anecdotal evidence suggests that the number of vaccines received during an encounter is not the main driver for adverse events following immunisation (AEFI), but instead certain combinations of vaccines present a multiplicative effect in the risk AEFIs and should be avoided when possible. In this project, the student will be introduced and applied machine learning methods of classification and clustering to identify the patterns of AEFIs and detect the risks of combinations of vaccines using large dataset from an active vaccine safety surveillance system in Australia. The student will learn from the workflow of data cleaning, modelling, analysis and evaluation using contemporary tools and programming languages, such as R or Python.
Expected outcomes and deliverables:	The student will gain insight of machine learning techniques, hands on data analysis, and contribute to the preparation of a scientific paper.
Suitable for:	The project is suitable for students with basic data analysis knowledge and understanding. Programming skills and experience in R and Python are desirable but not required.
Primary Supervisor:	Dr Luis Furuya Kanamori l.furuya@uq.edu.au
Secondary Contact	Hongen Lu hongen.lu@uq.edu.au
Further info:	The supervisor MUST be contacted by students prior to submission of an application.

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Project 14 title:	Indigenous students' health in Western Cape York: Creating a student-led curriculum
Hours of engagement & delivery mode	For the Winter program, students will be engaged for 4 weeks only. Hours of engagement must be between 25 hrs per week. Please outline if the project will be offered on-site, School of Public Health, Herston
Description:	Health-related aspects of personal development are taught patchily across Queensland schools, including material that considers menstrual health and hygiene. Programs that teachers can access are often drawn from urban and non-Indigenous sources and settings, which can be inappropriate or poorly-matched to the student recipients. An ongoing, Indigenous-led project in Western Cape York seeks to change this situation by working with remotely-located and Indigenous students to create a



	health curriculum guide for use in schools in the region as well as across Australia to other remote and Indigenous communities and health organisations. The winter scholar will work under the supervision of the two research leaders (one local and Indigenous in Western Cape, and the other at UQ Herston) to scope, research, support, write up and draft a curriculum guide.
Expected outcomes and deliverables:	The winter scholar will work under the supervision of the two research leaders (one local and Indigenous in Western Cape, and the other at UQ Herston) to scope, research, support, write up and draft a curriculum guide.
Suitable for:	Later-year undergraduate or Honours students who have undertaken courses from the Bachelor of Health Sciences, including courses on social determinants and First Nations health, are encouraged to apply. All applicants must have an open mind and open heart to building their cultural competency for sensitive and reflective work with and for First Nations Peoples.
Primary Supervisor:	Dr Nina Lansbury n.lansbury@uq.edu.au
Further info:	The supervisor MUST be contacted by students prior to submission of an application.

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Project 15 title:	Sociodemographic variations in heart health after cancer: A systematic review.
Hours of engagement & delivery mode	For the Winter program, students will be engaged for 4 weeks only. Hours of engagement must be between 30 – 36 hrs per week. Please outline if the project will be offered on-site, School of Public Health, Herston
Description:	<p>Cancer patients are at an increased risk of developing heart disease after cancer, partly due to the exposure to risk factors common to both cancer and cardiovascular disease, and the increased exposure to cardiotoxic cancer treatments.</p> <p>We want to know how the incidence of heart disease after cancer varies across different groups of people and by the contexts that we live in. We will answer this question by conducting a systematic review of the current literature.</p> <p>The winter scholar will be required to help refine and apply a search strategy to identify potentially relevant sources for inclusion in the systematic review. They will then assist in screening the sources based on eligibility criteria and assessing the quality of the relevant sources. The scholar will also have the opportunity to contribute to writing the systematic review, and to be involved in a publication.</p> <p>The scholar will also have the opportunity to be a member of the the cardio-oncology team as part of the First Nations Cancer & Wellbeing research program at SPH led by Professor Gail Garvey and Dr Abbey Diaz.</p>
Expected outcomes and deliverables:	Scholars will gain experience and skills in searching and screening academic literature and assessing the quality of sources. Scholars will also



	contribute to the development and writing of a systematic review that will be published in an academic journal.
Suitable for:	Students from a wide range of disciplines with a strong interest in public health research and health equity.
Primary Supervisor:	Miss Meredith Burgess meredith.burgess@uq.edu.au
Further info:	The supervisor CAN be contacted by students prior to submission of an application.

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Project 16 title:	Evidence for the development of a travel smartphone application: a novel approach to assess travel - related illness and associated health risk behaviour.
Hours of engagement & delivery mode	For the Winter program, students will be engaged for 4 weeks only. Hours of engagement must be between 25 hrs per week. Please outline if the project will be offered on-site,
Description:	<p>Currently, there is sparse information on travel-related illness imported into Australia due to limited and inconsistent routine surveillance. It is crucial to understand the wide range of travel patterns and traveller behaviours while overseas, and their association with health outcomes. The enhanced capabilities of modern mobile phones applications (apps) have the potential to help improve tailored evidence-based medical advice prior to departure, with the potential to decrease travel-associated illness and the importation of pathogens into Australia.</p> <p>The goal of this project is to investigate the acceptability and usability of a travel health mobile application (app) which would allow travellers to report and access travel health-related data and associated health risk behaviours. By analysing the transcript of semi-structured interviews, this study aims to (i) collect evidence on the factors, function and specifications (features) that may influence the use of the smartphone travel app over time, (ii) identify what type of approaches could enable the smartphone app to be effective in the collection of real-time health risk behaviour data and (iii) identify if there are ethical concerns regarding the utilisation of health apps and digital data sharing.</p>
Expected outcomes and deliverables:	The student will gain skills conducting qualitative research, particularly implementing thematic analysis to identify health information seeking behaviour. It is expected that the results will be written and submitted for publication.
Suitable for:	Students who have qualitative research skills and are considering a PhD.
Primary Supervisor:	Dr Angela Cadavid Restrepo a.cadavidrestrepo@uq.edu.au
Further info:	The supervisor MUST be contacted by students prior to submission of an application.

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