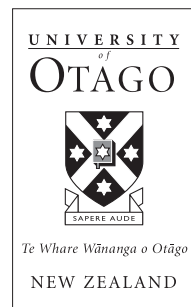
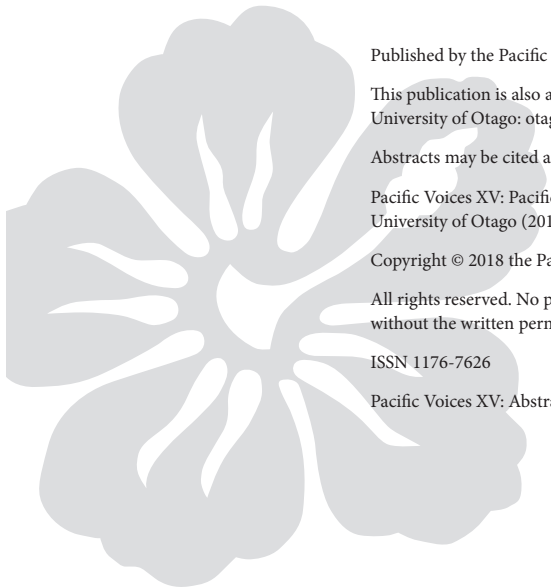


# Pacific Voices XV

PACIFIC POSTGRADUATE SYMPOSIUM

27 SEPTEMBER 2018





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Pacific Voices XV: Abstracts for the Pacific Postgraduate Symposium.

## Foreword

A warm Pacific welcome to the *Pacific Voices XV Postgraduate Symposium 2018*! This symposium showcases research by Pacific postgraduate students. At the University of Otago we are fortunate to have a very talented group of Pacific postgraduates whose research will make a significant contribution to a range of fields, with widespread application to the Pacific region and beyond. Congratulations to those students whose work features in these Proceedings for the *Pacific Voices XV Postgraduate Symposium*. Their research is inspiring, impressive and importantly, it will make a difference!

The participants of *Pacific Voices XV Postgraduate Symposium, 2018* are all part of a vibrant graduate research community. These postgraduate students and their supervisors push the boundaries of knowledge, with new ideas, creativity and enthusiasm.

I am sure that readers of *Pacific Voices XV* will be impressed with the quality and variety of research that is reported in this volume. In 2018, the presentations span zoology, politics, sociology, peace and conflict studies, science communication and physics. The topics range from 'Cultural influences on the extended self through clothing', to 'Pacific conceptualisations of and experiences with poverty: A case study of Samoans in Christchurch'. These are just a few of the presentations that are included in this Symposium.

Geographically, the research being reported includes issues in Samoa, as well as issues related to Pacific Islanders in Aotearoa/New Zealand, and research on sharks near Stewart Island.

Finally, on behalf of the University, I would like to thank all those responsible for *Pacific Voices XV*, and in particular Tofilau Nina Kirifi-Alai and Alison Finigan.



Professor Rachel Spronken-Smith  
Dean, Graduate Research School

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**EMMA DUNLOP-BENNETT**

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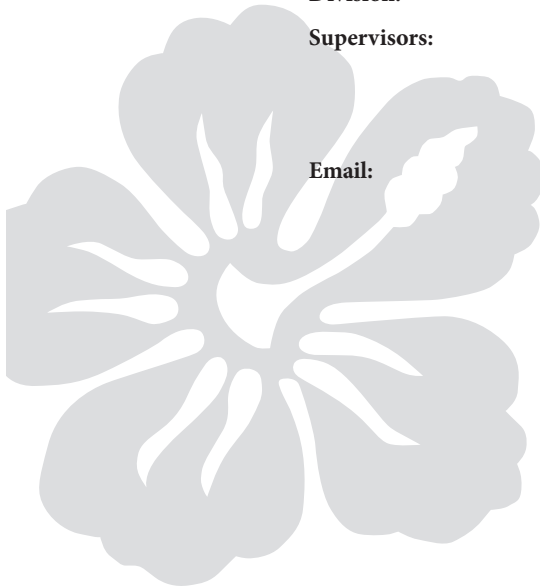
Emma Dunlop-Bennett is a doctoral student at the University of Otago. Prior to starting her doctoral research, Emma was the Country Representative for World Vision in Vanuatu. Emma also worked for the Ministry of Foreign Affairs and Trade where she managed New Zealand's Pacific Regional Aid Programme in Wellington and then in Suva at the New Zealand High Commission.

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THROUGH THEIR EYES: A SAMOAN PERSPECTIVE ON  
CHILD WELLBEING

.....  
**Emma Dunlop-Bennett**  
.....

*If we fail to create our own [narrative]  
someone else will do it for us  
(Hau'ofa 1993, p. 128).*

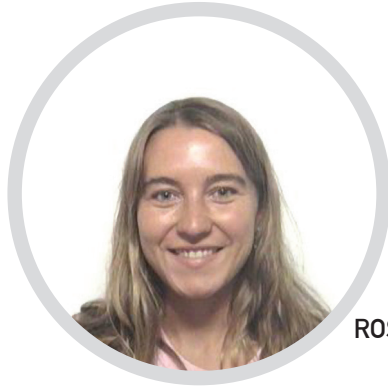
Narratives help shape our perceptions, which over time come to be accepted as truths. In the absence of constructing our own narrative, we may be portrayed in ways that are counter-intuitive to how we see ourselves. While there are some exceptions, the generalised view of Pasifika is couched in labels such as hard-to-reach and disengaged (Loto et al 2006; Neilson, 2015). This research seeks to provide a counter-narrative by asking 'those that know'. For this research, 'those that know' are Samoan children and their parents. This research privileges their voices to understand, from their lens, what wellbeing means to them. In doing so, it helps to build a counter-narrative.

Guided by *Talanoa ile i'a* (Faleolo, 2009), this research approach positions children as 'experts' on issues that affect them and creates the space for them to share their knowledge. Underpinning *Talanoa ile i'a* is that there are four perspectives to the Samoan worldview: the *i'a* (fish), *pui ama* (person in the canoe), *la'au* (tree), and *mauga* (mountain). All of these perspectives are needed to form a complete picture. The *i'a* are represented by 8-year old Samoan children living in Wellington who were asked to take photos of what makes them feel happy, safe, and loved. These photos were used by the children to guide their *talanoaga* in a group setting. Individual *talanoaga* were also held with their parents, which represent the *pui ama*. This presentation offers preliminary findings of how Samoan children and their parents conceptualise wellbeing.

**Notes**

Pasifika is a collective term used to refer to the diasporic Pacific peoples and cultures in New Zealand. It describes people who have migrated from the Pacific – a region comprising 22 Pacific Island Countries and Territories – or who identify as Pasifika through descent.

.....  
**Keywords:** Child wellbeing, Samoa diaspora in New Zealand



**ROSA EDWARDS**

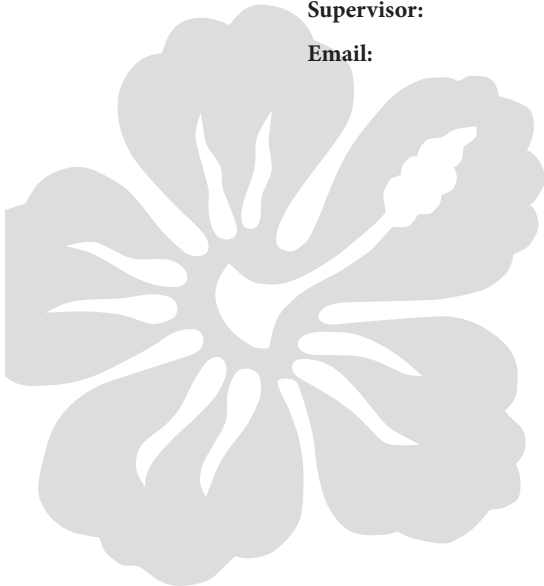
Rosa is of Tongan descent. She holds a BAppSci (Aquaculture and Fisheries) from the University of Otago. She is currently an Honours candidate. She interned at the Australian Institute of Marine Science and instructed for the Sir Peter Blake Marine Education Centre. Rosa aims to work in management of sustainable fisheries development in the South Pacific.

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QUANTIFYING HABITAT SELECTION BY BROADNOSE SEVENGILL SHARKS *NOTORYNCHUS CEPEDIANUS* WITHIN PATERSON INLET, STEWART ISLAND, NEW ZEALAND

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**Rosa Edwards**

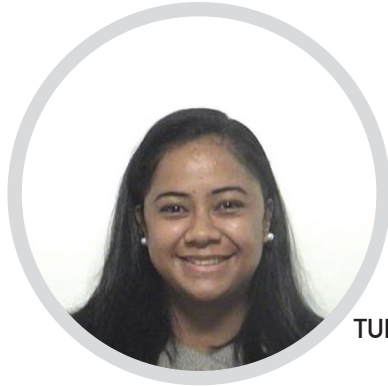
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In New Zealand/Aotearoa, only 11 of the 113 shark and ray species are managed under the fisheries quota management system. The lack of knowledge on status and ecology of the majority of shark species emphasises the need for further research. Among the least studied of New Zealand's sharks is the common coastal predator, the broadnose sevengill shark/tuatini *Notorynchus cepedianus*. Investigating distribution of apex predators is essential for understanding their habitat requirements and can provide insights into community ecology. The aim of this study is to quantify habitat selection of sevengill sharks by investigating relative abundance in relation to a suite of explanatory environmental variables in Paterson Inlet/Te Whaka a Te Wera, Stewart Island/Rakiura.

Baited remote underwater video footage was collected during three sampling trips in February, April and June 2018, during which habitat data hypothesised to influence shark distribution were gathered in situ. The number of unique individual sharks observed per deployment was used as an index of relative abundance, and related to the habitat variables in a multi-model inference framework using poisson generalised linear models. Based on minimum AICc the best-fitting model showed a positive effect on relative shark abundance of both water temperature and salinity, and a negative effect of ambient light. The effect of 'prey availability' is yet to be investigated. These results will be useful for understanding the ecology of sevengill sharks, predicting their distribution elsewhere, and developing management and conservation strategies for the species.

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**Keywords:** Sevengill shark, *Notorynchus cepedianus*, species-distribution modeling, New Zealand



TUMANU FUTU

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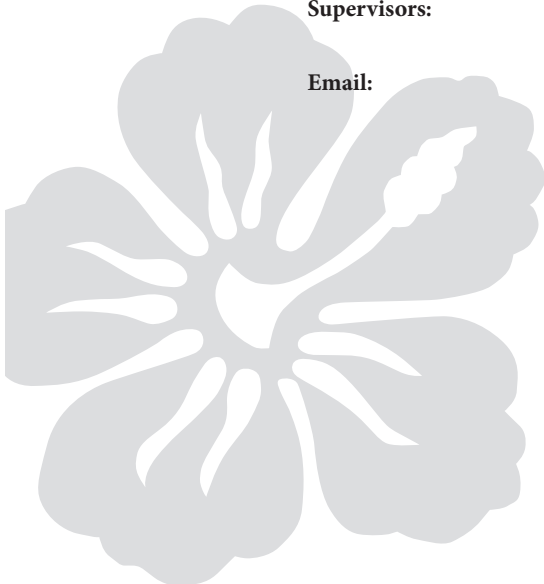
Tumanu Futi is a Samoan student enrolled in a Postgraduate Diploma of Science in the Department of Physiology at the University of Otago. Tumanu received funding from the Health Research Council to undertake a summer studentship researching the effects of uric acid on diabetes. She is employed in the Department as a Physiology tutor.

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School of Biomedical Sciences

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SOLUBLE KLOTHO DECREASES THE SHEAR STRESS RESPONSE  
OF EPITHELIAL SODIUM CHANNELS

.....  
**Tumanu Futi, Martin Fronius, Andrew Bahn, Zoe Ashley**  
.....

Epithelial sodium channels (ENaC) are widely expressed across epithelia of many organs. In the kidney, these proteins function to allow the influx of sodium ions and subsequently indirect flow of fluid into the cells, therefore making these channels an integral part of blood pressure regulation. Klotho is a single transmembrane protein originally identified in aging studies. Post translational modifications of this protein produces a soluble form that has humoral factors. This soluble form shares homology with glycosidases which act to cleave off the sialic acid from N-glycans of certain proteins. This modulation to N-glycans decreases the retrieval rate of channels from the membrane causing a high expression of channels such as calcium channels.

Neuraminidase is a glycosidase acting similarly to klotho. Preliminary results from the Fronius lab show instead of a retention of ENaC, a decrease in sodium current after neuraminidase treatment. This suggests two opposing models for the mechanism of action for soluble klotho. Thus, the aim of this project is to determine the effect of klotho on ENaC activity. This is important as klotho could be a modulator of ENaC activity and ultimately blood pressure. The hypothesis therefore is; klotho will decrease the activity of ENaC. To study this, *Xenopus* oocytes will be used to co-express ENaC and klotho and using the two-electrode voltage clamp setup for functional recordings and western blotting for klotho expression analysis. To date, the results of this project show a decrease in ENaC shear stress response due to soluble klotho.

.....  
**Keywords:** Blood pressure, ENaC, ion transport, klotho



**EDEN FAITH  
ULUSAGOGO IATI**

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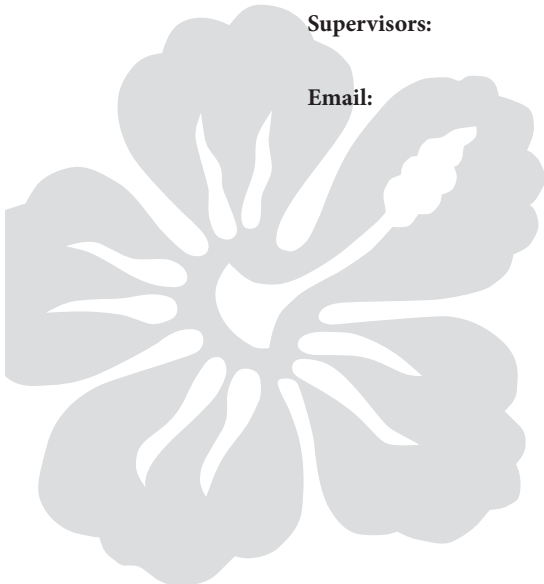
Eden is a Samoan woman from Christchurch. She completed a Bachelor of Arts in Politics at the University of Otago and is currently enrolled in the Master of Indigenous Studies programme. Eden's research looks at traditional governance systems in the Pacific, focusing on the *fa'amatai*, and the extent to which it affects political transparency and accountability in Samoa.

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DEMOCRACY AND THE FA'AMATAI: A STUDY ON SAMOA'S  
TRADITIONAL GOVERNANCE SYSTEM

.....  
**Eden Iati**  
.....

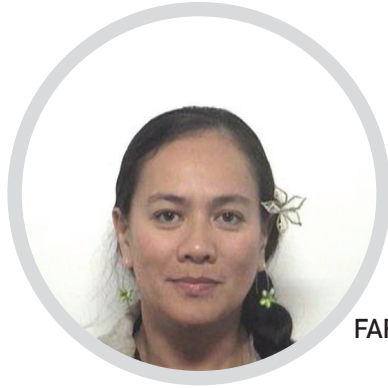
Democracy is defined as 'a system of government by the whole population or all the eligible members of a state, typically through elected representatives'<sup>1</sup>. It is more commonly understood as bringing the power to rule to the people. Two democratic principles are significant in this process; 1) political transparency, and 2) accountability. This paper looks at how these principles operate in the *fa'amatai* (chiefly system – which is the traditional governance system in Samoa).

The paper focusses specifically on the relationship between traditional and Western systems of democratic governance. It seeks to answer the question of whether democracy is strengthened or weakened through the traditional governance system, the *fa'amatai*: are traditional governance systems and their practices beneficial to the increasing implementation of democracy in the Pacific.

.....  
**Keywords:** Politics, democracy, tradition, *matai*  
.....

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1 Heywood, A. (2014). *Politics*. Basingstoke: Palgrave Macmillan.



FARA IATI

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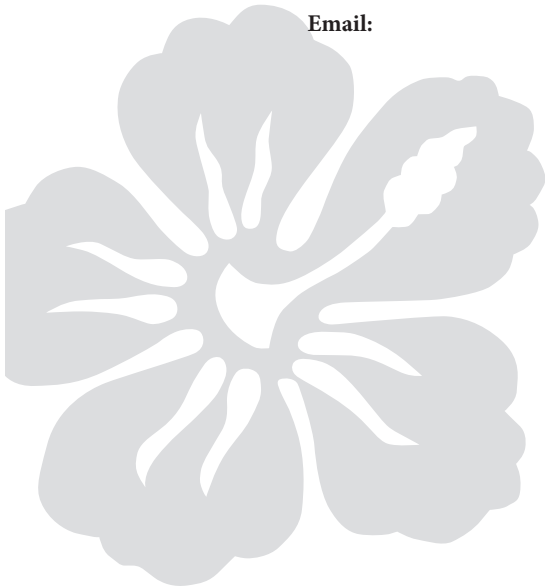
Fara is Samoan from the village of Lufilufi. She holds a Bachelor of Arts degree in History and Māori, and is currently enrolled in the Master of Indigenous Studies programme. She is a recipient of the University of Otago Masters Scholarship and the University of Otago Study Grant for Māori and Pacific Island Students.

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PACIFIC CONCEPTUALIZATIONS OF, AND EXPERIENCES WITH,  
POVERTY: A CASE STUDY OF SAMOANS IN CHRISTCHURCH

.....  
**Fara Iati**  
.....

For more than a decade, Pacific people in New Zealand have been highly represented in poverty statistics and experience lower socio-economic outcomes compared to other ethnic groups. This is despite numerous government policies aimed at addressing the issue. The purpose of this research is to understand why Pacific people generally have a lower socio-economic status than other New Zealanders and incomes lower than the national average. The intention is to compare these experiences to narratives that inform and are manifested in government policies.

The study adopts *Talanoa* as the research methodology. Participants will be drawn from the Christchurch Samoan community and involved in interviews and questionnaire survey. Interaction with participants focusses on three objectives: first, identifying the definition and understanding of poverty. Second, exploring how the government conceptualizes and frames policies on poverty. Third, comparing and contrasting government conceptualizations and policies with that of the study participants, in particular their views on poverty solutions.

.....  
**Keywords:** Poverty, definition, *Talanoa*



**MARY JANE KIVALU**

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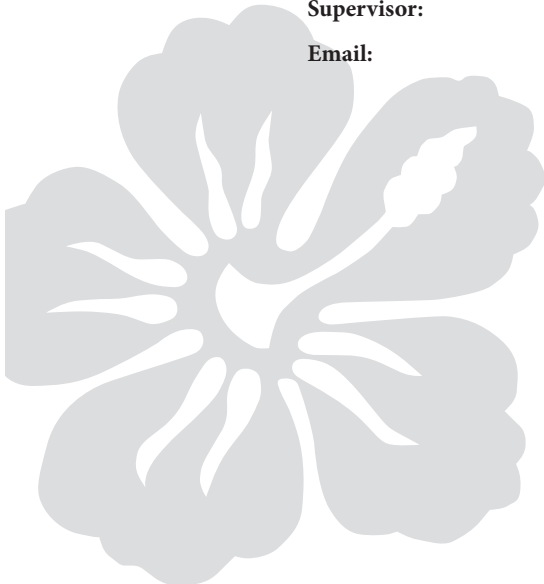
Mary Jane Kivalu is of Tongan descent. She completed a BCom and an MBA at Otago, and is currently enrolled in the Doctor of Business Administration programme. In 2017, Mary Jane received the Otago Business School's Westpac Travelling Scholarship and the Otago University Council's David S Wright Memorial Prize. Mary Jane is the President of the New Zealand Tongan Tertiary Students' Association.

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**Mary Jane Kivalu**

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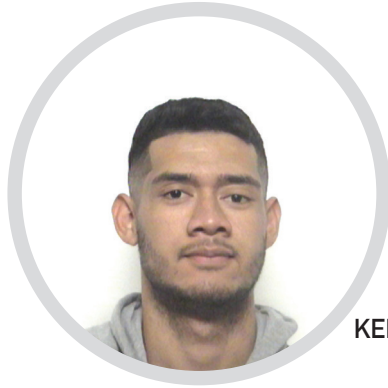
Mary Jane's research topic was derived from a project that she did as a summer intern at the State Services Commission under the Tupu Tai Public Sector Internship Programme. The project involved looking at diversity and inclusion across the 36 agencies in the core Public Service.

This research looks at analyzing current practice for recruitment processes in the workplace, and its connection to inclusion and diversity. The aim of the research is to create an alternative recruitment framework for organizations to recruit a diverse pool of employees. The research is currently at the planning stage, as the idea needs to be refined to the appropriate scope.

A case study for this research will be drawn from the public sector. An analysis of the diversity and inclusion content in corporate documents of core public service agencies has identified the need for inclusion and diversity to be taken into account in this sector. It is important that organizations seek to reflect the customers or group of people that they serve. Pacific peoples make up 7% of the population, according to the last census, but many public service agencies do not reflect this. More than 50% of public service agencies do not meet this standard and for the agencies that do, it is not clear about where in agencies Pacific peoples are placed. If they are all in frontline roles instead of policy and decision-making roles, is the agency truly diverse and inclusive of Pacific peoples and other ethnic minorities?

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**Keywords:** Diversity and inclusion, New Zealand Public Service, HR recruitment, Pacific peoples



**KERESOMA LEAUPEPE**

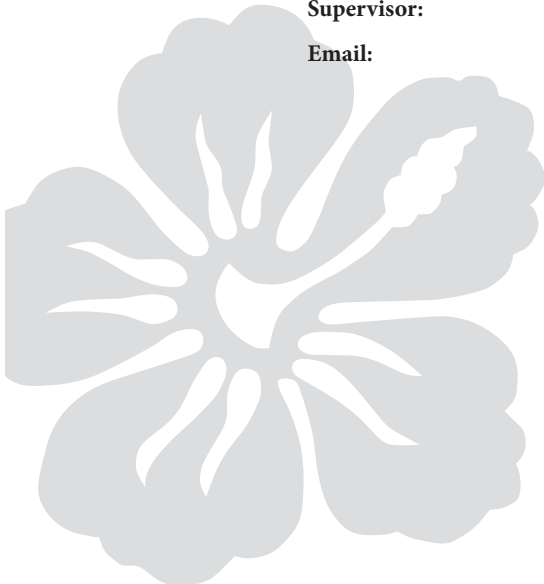
Keresoma was born and raised in Samoa where he completed most of his academic career. In 2015 he received a scholarship from the Samoan government to study for a Bachelor of Biomedical Science with Honours at the University of Otago. In 2018 Keresoma will complete an MSc in genetics, supported by a National University of Samoa scholarship. He has just been awarded a PhD scholarship from the University of Otago.

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## ASSOCIATION OF POLYNESIAN-SPECIFIC VARIANTS OF PRPSAP1 AND SLC22A3 GENES WITH GOUT

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### **Keresoma Leaupepe**

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Gout is a disease caused by over-production and/or under-excretion of urate, which causes hyperuricaemia. This leads to the formation of monosodium urate crystals in joints and other parts of the body. Gout is a serious health issue in New Zealand, because approximately 7% of New Zealand Māori and Pacific people are diagnosed with gout, compared to 3% of New Zealand Europeans. The aim of this study was to test for associations between gout and serum urate with the five variants of interest, (LRP1 rs753206313, PRPSAP1 rs749392722, ABCC5 rs369277426, SLC22A3 rs565948998 and BCAS3 rs2643103). These have been shown, through a previous re-sequence project, to have a Polynesian-specific association with hyperuricaemia. I also investigated whether the PRPSAP1 and SLC22A3 genes have any expression quantitative trait loci (eQTLs) signals. These contribute to gene expression level variation, which mediates serum urate control.

The five SNPs were genotyped using TaqMan®. The sample sets had 779 gout cases and 919 controls recruited from Māori and Pacific peoples in New Zealand. Multiple datasets were used to find PRPSAP1 and SLC22A3 eQTLs involved in gene expression variation that contribute to serum urate modulation. Associations with gout were found with the PRPSAP1 rs749392722 and SLC22A3 rs565948998 minor alleles in Eastern and Western Polynesian populations. Both SNPs meta-analysis were in the same direction. The eQTL analysis showed that SLC22A3 and PRPSAP1 have SNPs associated with serum urate control and also contributed to SLC22A3 expression level variation. These results provide evidence that both the PRPSAP1 and SLC22A3 genes have a Polynesian-specific causal role in gout and hyperuricaemia.

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**Keywords:** Gout, Hyperuricaemia, Polynesian, Pacific, Māori



**MICHAEL FUSI LIGALIGA**

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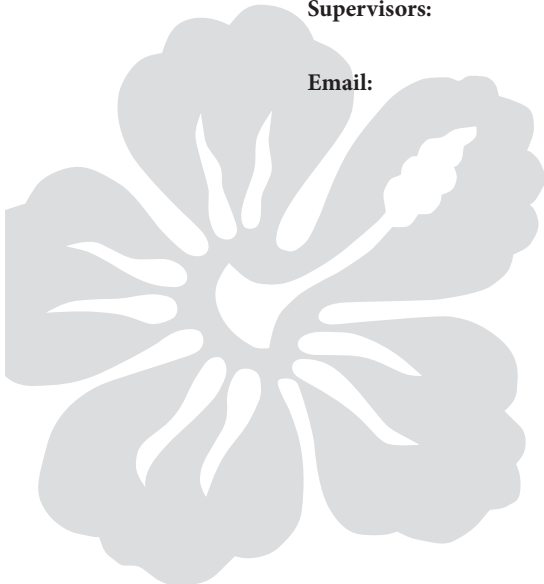
Michael is of Samoan descent. He has a BA in Political Science and International Peacebuilding from Brigham Young University Hawaii (BYUH). After graduating from the University of Otago with an MA in Peace & Conflict Studies he spent two years teaching at BYUH. Michael returned to Otago in 2015 to pursue a PhD which he successfully completed in early 2018.

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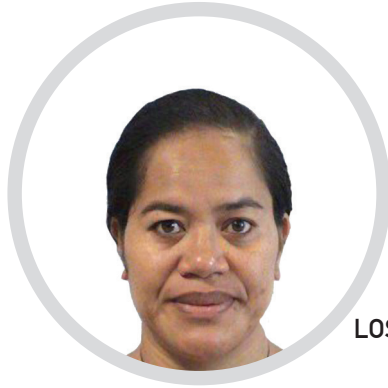


FAA SAMOA: PEACEBUILDER OR PEACEBREAKER?  
UNDERSTANDING SAMOA'S DOMESTIC VIOLENCE PROBLEM:  
A PEACE AND CONFLICT PERSPECTIVE

.....  
**Michael Fusi Ligaliga**  
.....

Over the past 30 years, Samoa has been a model example of peace and stability throughout the Pacific region. The fusion of traditional (*fono o matai* and *faamatai*) and western institutions (Westminster style of democracy) of governance, albeit not a perfect marriage, has nonetheless been credited for Samoa's ability to sustain peace and stability. Despite this, domestic violence is now an epidemic in Samoa. This research employs Galtung's *Typology of Violence* to analyze Samoa's domestic violence issues. Galtung suggests there are three types of violence—direct, structural and cultural and that direct violence is reinforced by structural and cultural violence. From this discussion, three themes: *aiga* or family, *nuu/matai* or village/chief, and *ekalesia* or church are identified as contributors to domestic violence in Samoa. In addition to Galtung's theories, the thesis incorporates Dugan's Nested Theory of Conflict (NTC) and Lederach's Nested Time Paradigm (NTP) with Samoan traditional protective mechanisms to draw attention to the shortcomings of previous reports and to make practical recommendations for addressing the problem of domestic violence in Samoa.

.....  
**Keywords:** Cultural violence, structural violence, nested time paradigm, nested theory of conflict



**LOSA MOATA'ANE**

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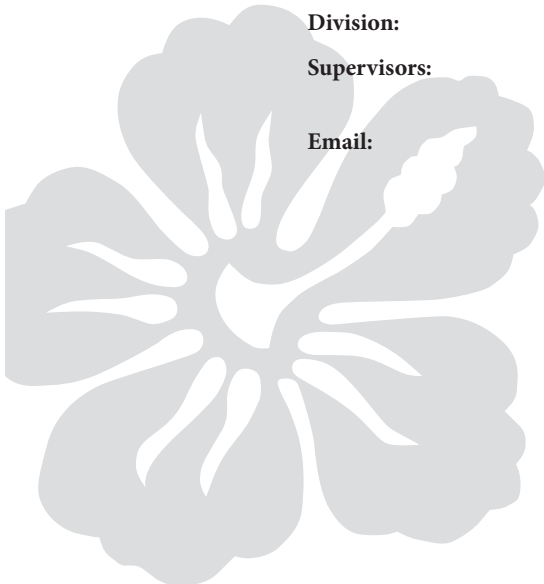
Losa is of Tongan descent. With degrees in Nursing, Nutrition and Public Health, she completed a PhD at the University of Otago in 2018, supported by a scholarship from the Health Research Council and the Department of Public Health, University of Otago, Wellington. Losa has worked in a variety of senior health roles across several central and local government departments. Losa is currently involved in research and teaching and participates widely in Pacific community activities.

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IMPROVING PACIFIC HEALTH AND REDUCING HEALTH  
INEQUALITIES: POLICY IMPLICATIONS

.....  
**Losa Moata'ane**  
.....

The principal purpose of this research was to analyse the Pacific health sector experience during the 2000 health reforms, which established District Health Boards (DHBs) and required, for the first time, an explicit focus on earlier strategies and policies to improve Pacific health and reduce health inequalities.

This qualitative research aimed to capture the stories and experiences, voices and viewpoints of those who paddled the journey to try to improve Pacific health and reduce health inequalities during this period of intensive reform. Recommendations were made for future health policy development to effectively improve Pacific health and reduce health inequalities.

.....  
**Keywords:** Pacific leadership, Pacific health leadership, health inequality, health policy, health systems



**JAYE MOORS**

Jaye is from Samoa and has completed a BSc and PgDipSci in Anatomy, and an MSc in Biochemistry (with Distinction) at Otago. She is currently studying towards a PhD in Biochemistry supported by an HRC PhD scholarship. Jaye's research looks at integrating scientific and medical biology knowledge to understand the genetic and environmental influences on metabolic disease in Polynesians.

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Dr Mele Taumoepeau (Psychology)

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- 
1. Gentles, D. M et al. (2007). Metabolic syndrome prevalence in a multicultural population in Auckland, New Zealand. *N Z Med J*, 120(1248), U2399.
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  5. Krishnan, M. M et al. (2017). Discordant association of the CREBRF rs373863828 minor allele with increased body mass index and protection from type 2 diabetes in Māori and Pacific (Polynesian) people living in New Zealand. *bioRxiv*, 1881



'CARDIORENAL METABOLIC DISEASE' RISK FACTORS IN YOUNG PACIFIC PEOPLE LIVING IN NEW ZEALAND

Jaye Moors, Finau Taungapeau, Eric Nabalagi, Lester Dean, Mele Taumoepau, Tony Merriman

Obesity, diabetes and renal diseases are key features of 'cardiorenal metabolic disease,' which disproportionately affects ethnic minority populations contributing to excess health burden in Pacific people. In New Zealand (NZ), the prevalence of cardiorenal conditions in Pacific populations is ~3-fold more than the general population<sup>1,2</sup>. Recent genetics of obesity studies identified association of a missense variant rs373863828 (p.Arg457G1n) in the CREBRF gene with increased body mass index (BMI) yet protects against type 2 diabetes in Samoans in Samoa<sup>3</sup>, Tongans<sup>4</sup>, as well as the adult Māori and Pacific populations of NZ<sup>5</sup>. Its association in the younger Polynesian population is yet to be determined. This study aims to investigate the environmental and genetic influences on the cardiorenal risk in younger Pacific people.

A total of 255 Pacific participants (aged 15 – 25 years) in NZ provided personal information, DNA and urine samples. Taqman® genotyping of the rs373863828 variant was followed by association analyses in R-Studio. Association testing was performed with BMI, log-transformed BMI, anthropometric measures and serum lipid samples.

38% of this cohort were overweight, 30% obese and 7% morbidly obese. 42.75% had one or two components of the metabolic syndrome (MetS), and ~ 6.27% met full criteria for MetS. An increase in BMI inferred increases in blood pressure, low-density lipoprotein cholesterol, serum urate, and a decrease in high-density lipoprotein cholesterol. These associations are suggestive of metabolic processes that progress into adult metabolic conditions such as heart disease, gout and other complications.

The minor allele frequency of rs373863828 was 18%. Sex-specific analyses demonstrated association of the minor allele with increased BMI ( $\beta = 2.84 \text{ kg/m}^2$ ,  $P = 0.002$ ) and waist circumference ( $\beta = 4.94 \text{ cm}$ ,  $P = 0.002$ ) in females, and an association with height in males ( $\beta = 3.10 \text{ cm}$ ,  $P = 0.004$ ). There was no evidence for association with lipid measures.

Our findings suggest that the future health trajectory of this cohort will be poor. To eliminate and/or reverse cardiorenal disparities, observational studies ought to inform intervention studies. Therefore, this cardiorenal metabolic assessment will provide a basis for the Pacific Trust Otago to inform their interventions. Furthermore, given the increasing significance of obesity in global public health, the prevalence of the rs373863828 variant and the observed effect sizes, we can surmise that this variant offers an opportunity for additional public health initiatives focused on preventing and reducing obesity in at-risk populations.

**Keywords:** Pacific, Genetic, Epidemiology, Cardiorenal, obesity, metabolic syndrome



**RAVITESH RATNAM**

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Ravitesh is Fiji-Indian born in Aotearoa. He completed a Bachelors degree at Victoria University of Wellington, studying Biology and Religious Studies. He is completing his Masters in Science Communication at Otago where his experiences in education fuel his passion for providing a positive and inclusive education for all.

**Academic department:** Department of Science Communication

**Division:** Sciences

**Supervisor:** Associate Professor Nancy Longnecker

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EXPLORING NZ SECONDARY SCHOOL SCIENCE STUDENT PERCEPTIONS OF SCIENTIFIC AND CULTURAL KNOWLEDGE

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**Ravitesh Ratnam**  
.....

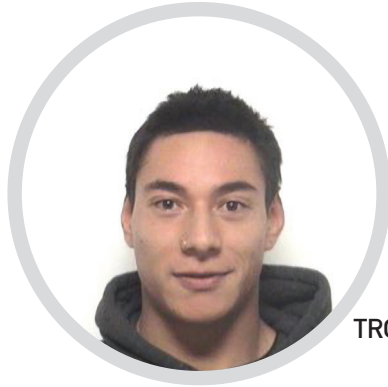
Underrepresentation of Indigenous minorities in science stems from an ill-fitting science education provided for Indigenous peoples. What is or is not presented in the science curriculum is an extension of what is accepted as scientific. This research investigates what students consider as 'science', as a reflection of their current science education, and offers recommendations for the inclusion of Māori knowledge in the Aotearoa science curriculum.

Participants were high school science students (n=191, age 13-17) enrolled in NCEA, the most common high school curriculum in Aotearoa. In groups of 3 or 4 (n=57), participants were presented with 20 photos of items such as beakers, a soccer ball or a waka. They were asked to fit each item into one of four categories: scientific knowledge, cultural knowledge, scientific and cultural knowledge or neither.

Data was collected from object categorization, discussions of groups during the activity (n=18) and post-activity, class-wide discussions involving 4-8 groups (n=4). Statistical analysis on object categorization implied scientific or cultural associations while participant reasoning, deduced by thematic analysis from transcripts, further developed these ideas.

Results show a strong and immediate association of Māori objects as relating only to culture, hindering Māori knowledge being seen as science. However, with discussion, participants can recognize science in the technology-related aspects of Māori objects, signaling potential for including Māori knowledge in the science curriculum. Developing teachers who can facilitate discussion are highly recommended for developing a culturally aware science curriculum.

.....  
**Keywords:** Indigenous, science, education, Māori



**TROY RUHE**

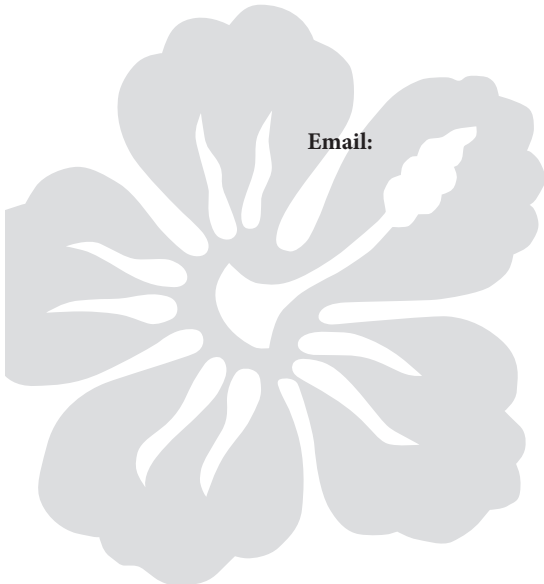
Troy Ruhe is of Cook Islands and New Zealand Māori descent and is in his first year of PhD study. Troy received a New Zealand Health Research Council Pacific PhD Scholarship in 2018. His area of research focuses on the provision of culturally specific and sensitive physical activity interventions to improve health in Pacific Islands communities.

**Academic department:** School of Physical Education

**Division:** Sciences

**Supervisors:** Dr Lynnette M Jones  
Faumuina Associate Professor Fa'afetai Sopoaga (Division of Health Sciences)  
Associate Professor Debra Waters (Medicine and Physiotherapy)

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THE 'NIU MOVEMENT': THE ACCEPTIBILITY AND EFFECTIVENESS OF CIRCUIT BASED EXERCISE IN COOK ISLANDS COMMUNITIES

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**Troy Ruhe**, Faumuina Associate Professor Fāʻafetai Sopoaga,  
Associate Professor Debra Waters, Dr Lynnette M Jones  
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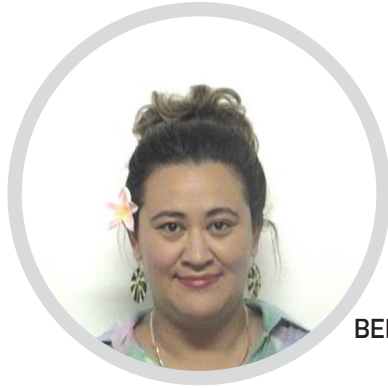
Exercise has been associated with positive health benefits and mitigation of risk factors associated with non-communicable disease (NCD); however, there is little research in ethnic specific exercise programmes in Pacific Islands communities. Physical activity interventions within Pacific Islands communities have reportedly been established from as early as 2006, but there is a lack of evaluation strategies to assess the effectiveness of such programmes.

The 'Niu Movement' is a physical activity programme that was designed in collaboration with Cook Islands community members while adhering to Cook Islands values and custom. The purpose of this study is to develop an acceptable and effective combined resistance and aerobic modality exercise programme based on Pacific Islands food preparation within a Pacific Islands cohort in Dunedin as well as Rarotonga.

The study is a single group pre-post design using a circuit-based combined resistance exercise modality programme, 'The Niu Movement'. Over a 12 week period, physical function will be assessed through administration of the Short Physical Performance Battery (SPPB) and 6-minute walk test (6MWT). A device to assess energy expenditure (the SenseWear Pro Armband) will be worn by participants during the exercise sessions. Questionnaires will be used to gauge the acceptability for individuals who participate in the programme.

This research may contribute to a more physically active and physically literate Pacific and specifically Cook Islands community. The reporting of the research process and findings may encourage future research within Pacific communities to seek innovative ways to encourage and increase physical activity while including cultural values and ideals.

.....  
**Keywords:** Physical activity, exercise, culture, Pacific Islands



**BERNADETTE SAMAU**

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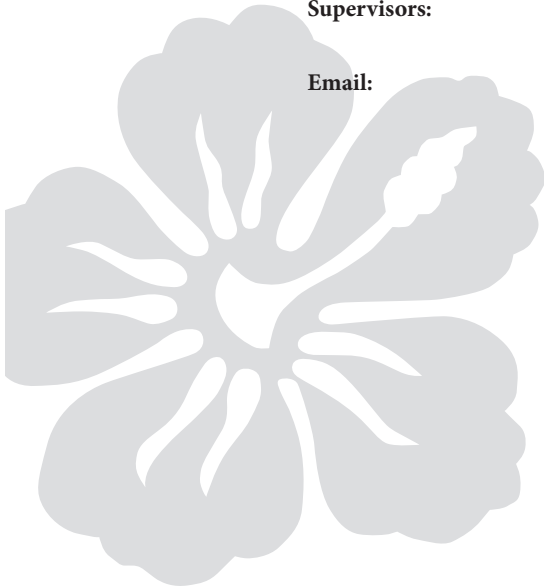
Bernadette is of Samoan descent. She holds an MBA, a BBus, a Diploma in Cultural Travel and Tourism from AUT and a Certificate of Training and Assessment from the Australia Pacific Technical College. She is a Marketing and Management Lecturer at the National University of Samoa and is studying towards a PhD in Marketing. Bernadette is supported by a University of Otago/National University of Samoa PhD scholarship.

**Academic department:** Marketing

**Division:** Commerce

**Supervisors:** Associate Professor Ben Wooliscroft  
Dr Alexander Ganglmair-Wooliscroft

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## CULTURAL INFLUENCES ON THE EXTENDED SELF THROUGH CLOTHING

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**Bernadette Samau**

.....

Our possessions, or the things we call ours, contribute to and reflect our identities. An understanding of consumer behaviour requires some understanding of the meanings that consumers attach to possessions. Factors that influence how people consume and attach meaning to possessions are largely a matter of culture. The concept of the extended self suggests our possessions are part of ourselves. Literature on the extended self highlights culture and concepts of self affect, the meanings consumers attach to possessions. Cross culturally, concepts of self and possession attachment differ from one culture to another.

The majority of the empirical work on extended self has been examined in the context of western consumers. This study addresses this gap by investigating the influence of Samoan culture on the extended self through clothing. Using projective photo elicitation, the study aims to investigate and compare the meanings and functions of favourite/important and desired clothing among male, female and transgendered women, in two different countries. The study also intends to identify cultural elements in the context of *Fa'asamoa* that influences the extended self.

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**Keywords:** Culture, *fa'asamoa*, extended self, self-concept, clothing



AMIE BARBARA LOSE TAUA

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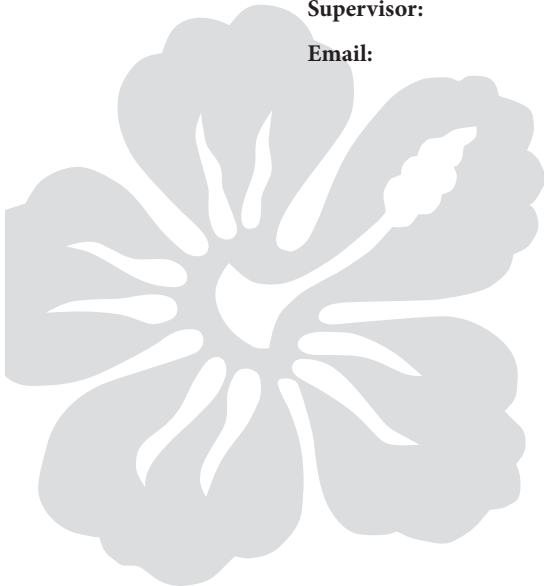
Amie Tauga is of Samoan descent and is enrolled in the Masters programme of the Department of Media, Film and Communications. Her thesis focuses on the spectatorship and viewing processes of bicultural audiences in a New Zealand context. Amie is supported by a Pacific Island Masters Scholarship. In June, 2018 she presented a paper on an aspect of her project at the *Space, Race, Bodies III: Walls* conference at the University of Otago.

**Academic department:** Media, Film and Communications

**Division:** Humanities

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A FOOT IN BOTH WORLDS: THE BICULTURAL AUDIENCE AND  
FILM IN NEW ZEALAND

.....  
**Amie Barbara Lose Taua**  
.....

This thesis is being developed as a pilot project for the development of bicultural audience reception research in a New Zealand context. In this study, a 'bicultural' person is defined as someone born in New Zealand to either one or both parents who have emigrated from a non-Western, non-European country. This criterion means that those in the bicultural audience have a binary of cultural knowledge, space and etiquette that is distinct and at times contradictory.

Bicultural people develop skills to navigate and negotiate diverse cultural spaces, applying knowledge accordingly and developing the ability to adapt to their cultural environment and expectations as required. This research concentrates on an audience that is rarely represented onscreen, but who applies a complex and sophisticated viewing process to achieve cinematic pleasure through the consumption of mainstream films.

The thesis does this in three ways. First, it explores psychological studies that dwell on the structure, influences and effects of embodying a bicultural identity. Second, it critiques the methodological approaches to understanding identity, rarely recognized in the field of audience reception. Finally, the thesis draws on the focus group results and compares them to the work of bell hooks<sup>1</sup> in creating a rudimentary but insightful understanding of bicultural viewing processes.

.....  
**Keywords:** Bicultural, NZ, bicultural audience, bicultural spectatorship, bicultural representation, film, cinema.

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1 hooks, bell. *Yearning: race, gender and cultural politics*. Boston: South End Press, 1990. Print.hooks, bell. *Black Looks*. Boston: South End Press, 1992. Print.



**ELIZABETH TAUATI-  
WILLIAMS**

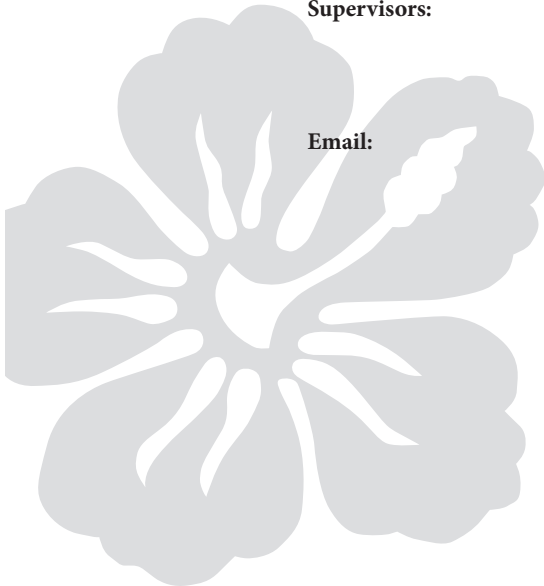
Elizabeth was born and raised in Samoa. She completed a degree in Dentistry at the Fiji School of Medicine followed by a Postgraduate Diploma in Clinical Dentistry at Otago. She is currently completing a Doctorate in Clinical Dentistry majoring in Oral Pathology. She is a recipient of the University of Otago Pacific Island Doctoral Scholarship.

**Academic department:** Dentistry (Oral Diagnostic and Surgical Sciences)

**Division:** Health Sciences

**Supervisors:** Professor Alison Rich  
Dr Benedict Seo  
Dr Haizal Hussaini  
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INVESTIGATION OF THE PRESENCE OF HUMAN  
PAPILLOMAVIRUS IN VERRUCAL-PAPILLARY LESIONS OF  
THE ORAL CAVITY

.....  
**E Williams, B Seo, H Hussaini, D Coates, AM Rich**  
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Human papillomavirus (HPV) is known to cause skin and mucosal infections, showing tropism for squamous epithelium. Verrucal-papillary lesions of the oral cavity (OVPL) include a spectrum of benign, potentially malignant and malignant epithelial lesions, thought to be induced by HPVs. The purpose of this study was to investigate the presence of HPV antigen and nucleic acids (DNA) in OVPLs using immunohistochemistry (IHC) and PCR.

Forty-one archival formalin-fixed paraffin-embedded (FFPE) tissue samples were obtained and grouped into four specific histopathologically confirmed groups of OVPLs and related lesions: squamous papilloma (SP; n=10), verrucous hyperplasia (VH; n=15), verrucous carcinoma (VC; n=6) and oral squamous cell carcinoma (OSCC; n=10). Cervical carcinoma tissue samples were used as positive controls (n=2). Anti-p16 and anti-pan HPV antibodies were used for the IHC. Quantification and detection of high risk-HPV (HR-HPV) (12 types, 16 and 18) DNA was carried out using qRT-PCR TaqMan assays.

Expression of p16 was detected in the following: SP 6/10 (60%), VH 13/15 (86%), VC 2/6 (33%) and OSCC 6/10 (60%). HPV antigen was detected with the anti-pan HPV antibody in the cervical control specimen and in one OSCC sample, which was also positive for p16. HR-HPV DNA was not detected in any of the OVPL FFPE tissue specimens using qRT-PCR. However, HR-HPV (12 types) DNA was detected in the internal controls as well as both positive control cervical tissue samples.

P16 was highly expressed in 65.8% of the OVPLs using IHC. HR-HPV DNA was not detected in OVPLs and only one OSCC sample was positive for HPV using IHC. Hence this study showed that p16 is not a useful surrogate marker for HR-HPV associated with OVPLs.

.....  
**Keywords:** Human papillomavirus, oral verrucal-papillary lesions, oral squamous cell carcinoma.



TUPUIVAO VAIASO

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Tupuivao is from Samoa and is currently pursuing an MSc degree in Energy Studies. He holds a BETech in Electrical and Electronics from the University of the South Pacific, and has recently completed a PGDip in Energy Studies at Otago. Tupuivao is the recipient of a scholarship from New Zealand's Ministry of Foreign Affairs and Trade.

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**Division:** Sciences

**Supervisor:** Dr Michael Jack

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## MATCHING SOLAR PHOTOVOLTAIC ELECTRICITY GENERATION TO DEMAND PROFILES

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### **Tupuivao Vaiaso**

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A drawback for integrating renewable electricity technologies into existing energy systems is the temporal mismatch between non-dispatchable supply from these sources and variable demand. This means that electricity is often supplied when it is not in demand, reducing its economic value and limiting technology uptake. Rooftop solar photovoltaic (PV) installations have grown rapidly in the last few decades due to government subsidies and large reductions in the capital cost of PV panels.

As subsidies are reduced, or in countries where they never existed, such as New Zealand, there is a need to explore ways of better matching solar PV supply with demand and to improve self-consumption of generated electricity. This project investigates two aspects of this in the New Zealand context.

Firstly, the research focuses on the self-consumption and economics of rooftop PV for a range of sites with different demand profiles, including a school and 17 households. This work shows that these demand profiles give rise to a wide range of self-consumption percentages and economic returns. A school profile in particular has a significant self-consumption percentage due to its time of demand that coincides with solar availability. This section is followed by an exploration of the potential for different tilts and orientations of PV panels to improve self-consumption and economic returns. This work shows that, while self-consumption can be improved by different orientations, the economics are dominated by total yearly production.

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**Keywords:** Renewable electricity, economic analysis, residential rooftop solar photovoltaic



**BRADLEY WATSON**

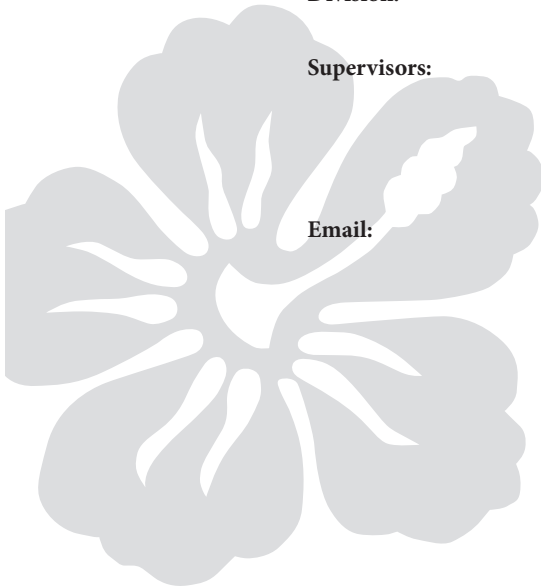
Brad is of Samoan and New Zealand European descent. He is enrolled as a doctoral student at the University of Otago, supported by a University of Otago Doctoral Scholarship. He has completed degrees in Law and English Literature and is an enrolled Barrister and Solicitor of the High Court of New Zealand. Brad has also worked in Pacific health at the University of Otago.

**Academic department:** Centre for Pacific Health, Va'a o Tautai  
Department of Management,  
Otago Business School

**Division:** Health Sciences  
Commerce

**Supervisors:** Dr Brian R. Spisak  
Faumuina Associate Professor Fa'afetai  
Sopoaga, Va'a o Tautai  
Professor Robin Gauld, Department of  
Management/Dean's Office

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**Bradley Watson**

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The New Zealand Health Strategy: Future Directions (2016)<sup>1</sup>, under the 'one team' strategic theme, calls for great leaders and managers to enable change and achieve sustainability. This call for leadership is also reflected in the Pacific health space. Here, specific-Pacific roles are created to serve and operationalize the strategic themes and imperatives set by the current health policy to improve outcomes for Pacific peoples in New Zealand. However, little is specifically known about how Pacific leaders in the health sector emerge, how they gain traction and how they maintain their own health and wellbeing to work sustainably between various world-views and organizational structures.

This research project aims to investigate what Pacific health leadership is, how this style of leadership operates between non-Pacific and Pacific realities and structures, how these leaders maintain their own health and wellbeing to ensure sustainable outcomes for themselves and the communities they serve. The project utilizes a multi-disciplinary approach, interweaving Pacific cultural knowledge, contemporary leadership theory, and biological and cultural evolution.

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**Keywords:** Pacific leadership, health leadership, Pacific epistemologies, leader health

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<sup>1</sup> Ministry of Health. 2016. New Zealand Health Strategy: Future Directions. Wellington.



**KAKAU FOLIAKI**

Kakau is a PhD student from Tonga. He holds a Bachelor of Science from the University of the South Pacific and a Master of Environment from the University of Melbourne. Kakau worked for the Energy Department of Tonga for nine years and has recently joined the Pacific Centre for Renewable Energy and Energy Efficiency.

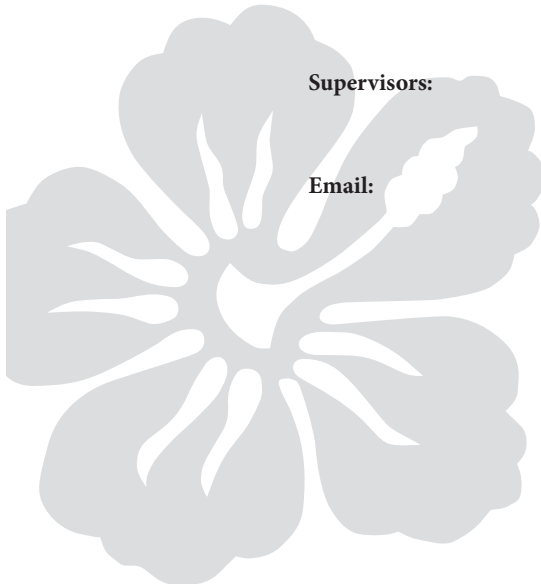
**Academic department:** Centre for Sustainability,  
Department of Geography

**Division:** Humanities

**Research topic:** Understanding energy culture of Tonga's residential sector: implications for effective energy efficiency policy

**Supervisors:** Dr Janet Stephenson  
Dr Patrick Vakaoti  
Dr Ben Anderson

**Email:** kakau.foliaki@postgrad.otago.ac.nz







**LUPEOLETALALELEI ISAIA**

Lupe is a Medical Laboratory Scientist at the Samoa National Health Service. She graduated from the University of Sydney with a BMedSc (2007) and an MSc in Medicine (2014). Lupe is currently enrolled for a PhD at Otago, researching antibiotic resistance patterns of bacteria from blood cultures taken from Samoans resident in Samoa and New Zealand.

- Academic department:** Centre for International Health
- Division:** Health Sciences
- Research topic or focus:** Antibiotic resistance patterns of bacteria from blood cultures taken from Samoans resident in Samoa and New Zealand
- Supervisors:** Professor Philip Hill  
Professor James Ussher
- Email:** isalu545@student.otago.ac.nz



SERA PERHAM

Sera is an Indigenous Fijian woman from the Mataqali (Clan) – Nauluni of the village of Lami, Tikina (District) of Suva in the province of Rewa, with maternal links (vasu) to Driti, Dawasamu. She is currently pursuing her Masters in Indigenous Studies through Distance Education.

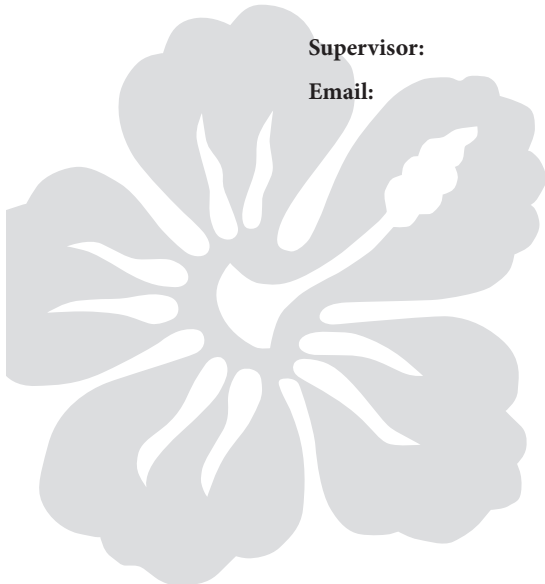
**Academic department:** Te Tumu, School of Māori, Pacific, and Indigenous Studies

**Division:** Humanities

**Research topic or focus:** The challenges faced by indigenous Fijian teachers teaching in English

**Supervisor:** Dr Alumita Durutalo

**Email:** perse400@student.otago.ac.nz





**YVONNE TAKAU**

.....

Yvonne is of Tongan descent and is from Ma'ufanga, Tongatapu. In mid-2017 she completed a BCom in Economics at Otago and is currently in her first year of the Master of Planning Programme. Next year she intends to focus her research on investigating the influences that politics has on planning processes in Tonga.

**Academic department:** Geography

**Division:** Humanities

**Research topic or focus:** An investigation into the political influences on planning processes in Tonga

**Supervisor:** To be determined

**Email:** takyv357@student.otago.ac.nz

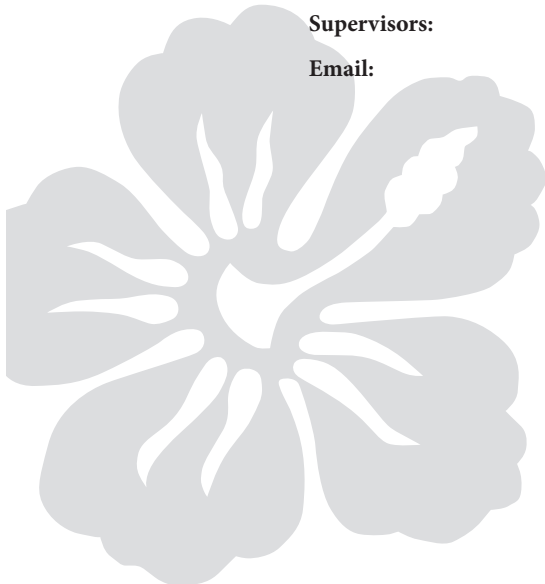


**HENRIETTA FA'ASAOLOUOLA  
DENZEL TAMAPUA**

.....

Henrietta (Etta) is of Samoan descent and has recently graduated with a BCom from Otago. While studying, she was supported by the Ministry of Foreign Affairs and Trade with an NZAid scholarship. In 2015, Etta was awarded the Indigenous Pacific Peoples first year achievement prize. Etta hopes to finish her Masters of International Business in 2019.

**Academic department:** Otago Business School  
**Division:** Commerce  
**Research topic or focus:** To be determined  
**Supervisors:** To be determined  
**Email:** tamhe063@student.otago.ac.nz



### *Fa'afetai tele lava 2018*

The Pacific Postgraduate Reference Group (PPRG) was established in 2002 to provide support to our postgraduate students via monthly seminars and meetings – to provide a safe place where they could come together and offer support to one another, share their frustrations and ideas and to create a close supportive family for themselves. This led to the idea of an annual symposium and the birth of the annual Pacific Voices Symposium.

The first symposium was held in 2004 and over the years, we have seen and witnessed the growth of many Pacific scholars who have successfully completed their studies and gone on to become leaders within our communities and wider fields. What we have also witnessed over the years is the growth of support for our students within each academic division. As our number continues to grow, it is very pleasing to bear witness to all these great milestones.

So the dream continues, the hard mahi continues and *Pacific Voices XV* is no small achievement. It is yet again another celebration of the wonderful projects our students are/were engaged in and especially the wonderful support network that enable us to make all of this happen.

- I would like to acknowledge our Keynote Speaker, Professor Helen Nicholson, Deputy Vice-Chancellor, External Engagement Division. Fa'afetai Lava Professor for your ongoing leadership.
- A big Fa'afetai Lava to Professor Spronken-Smith for her continued commitment to the Pacific Voices Symposium through the provision of the Foreword.
- Fa'afetai tele to our Chairs – Professor Tony Ballantyne, Pro-Vice-Chancellor, Humanities, Professor Tony Merriman, Department of Biochemistry and Professor David Fielding, Economics.
- Fa'afetai Tele Lava to our editorial team, a group of passionate Pacific staff and leaders who continue to guide our students and support the Centre in its many activities.
- Can I also acknowledge the wonderful support we received from the academic and professional staff who continued to attend our monthly seminars, offer support and provide workshops to help guide our students in their journeys. A big Fa'afetai to Alison Finigan and Dr Catherine Hobbs for organising this booklet and our symposium.

Finally, I would like to especially acknowledge lau Afioga Nanai Anae Dr Iati Iati who will be leaving us this year. Your vast dedication to the Pacific Voices legacy, as an editor, to chair the monthly seminars and also when called upon to lead our various cultural gatherings are very much appreciated. *Fa'afetai Tele Lava ma ia tafe toto ou ala.*

To the stars in this publication Fa'afetai Tele Lava and I wish you all a wonderful and successful Pacific Voices XV symposium!

Tofilau Nina Kirifi-Alai  
Manager  
Pacific Islands Centre



# Appendix

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KEYNOTE ADDRESS, *PACIFIC VOICES XIV*

5 October 2017

Emeritus Professor D. Gareth Jones

Bioethics Centre

Welcome to this Pacific Voices Symposium. This is a wonderful opportunity for you to present your own findings within a supportive community, and also to learn from others and find out what they have been doing. But you may ask, why listen to others talking about topics far removed from my own area? Will I even be able to understand what they are talking about, especially if some of the terminology is foreign to me? This may partly be true, but only partly. Why do I say this?

Let me tell you something about my own journey. When people ask me where I fit in to the University I find it difficult to give a straight forward reply, and this is not because I am a politician or a confused academic. What am I?

I am an anatomist who was for many years Head of the Anatomy Department. Within anatomy I was trained as a neuroscientist, and for very many years practically all my publications were in neuroscience. So I am a neuroscientist.

However, over quite a number of years I have branched out into bioethics, since as HOD of Anatomy I realized that most anatomists had little understanding of the numerous ethical issues in anatomy, and so I started writing as an academic in the bioethical literature. Very surprisingly, many people who know of my activities over recent years think I am a bioethicist. Some are even surprised to discover that my training is in the biomedical sciences. To make matters even more complicated, within the ethical area, some people know of my writings in the reproductive technologies and dealing with beginning of life issues, whereas others know of my work at the end of life in issues around how anatomists obtain bodies for dissection. Do they use unclaimed bodies or only bodies that have been donated for teaching and research purposes?

And then I have devoted a huge amount of my time to administration, both at departmental level and centrally in the University. Oh yes and there has been teaching too!

I only say all this to demonstrate that most people have to move from one area to another and in doing so cross disciplinary boundaries. This is essential in an ever-changing environment, but it is also healthy. Now I have to admit I have come to enjoy this mixture,



although it's now everyone's cup of tea. You have to learn to speak the languages of other people's disciplines and pick up their terminology, and you also have to be prepared to go on learning throughout your lives. And you do this by working with people with different backgrounds, and by reading widely outside your own area. I have just finished writing a paper with the title: 'Does Confucianism allow for body donation?' I can assure you I don't claim to be an expert in Confucianism, although I do know something about body donation. Of course, what I am doing is working with an expert in Confucianism, but I have to try and understand the points he is making so that I can integrate this into my interests in body donation. Actually, I have also written on Buddhist perspectives on body donation, and that was with a postgraduate student in Anatomy who is from Sri Lanka.

Actually, one of the things I have enjoyed doing over the years is writing and speaking to general audiences – that is, non-academic audiences. Unfortunately, one of the problems with some academics is that they don't take the time to talk to those outside their own very specialized areas. I always think this is a great shame, because they have a great deal to offer. But it does require time and thought, since you have to avoid using terminology and language that no one else will understand. One piece of advice I have repeatedly given to postgraduate students is to read magazines like *Time*, and see how they express difficult concepts in terms that can be understood by people who have no insider knowledge of that particular area. Give it a go; you can learn a lot for your own writing.

Forums like this are so important because they provide avenues where postgraduate students can showpiece their work, where they can gain experience at presenting, and where you can support and encourage one another. A symposium like this is especially valuable because it provides you with a supportive cultural setting; use this to the full and take advantage of it. After all, it is never easy exposing oneself and one's ideas to others within an academic environment.

You are exemplars for your communities, and I very much hope that your communities will benefit from having you in their midst. And so, as you continue with your postgraduate studies, and as you bring them to completion, ensure that you feed the results and consequences of your studies back into your communities in whatever ways are most appropriate. No matter how academic postgraduate study sometimes is, it should also have practical ramifications that will enhance understanding within your communities, and that will benefit the communities.

The perspectives you bring to your studies are important for all of us, no matter what our background, and I'm fascinated by the breadth of your presentations and also by the variety of experiences some of you have already had. Build on this and never be afraid to challenge established thought forms.

All of us bring something of ourselves to our postgraduate studies. We bring our backgrounds, both cultural and religious, and hopefully the outcome of our studies can feed into our families and communities, no matter what area of study we are in. However, there is another reality and that is that our studies will change us. They should make us inquisitive and questioning. As I hope you will already have learnt, we need to be able to critique what we read, so that we shouldn't be satisfied with simplistic answers. And this can sometimes get us into trouble! But also remember that not one of us has all the answers, and any of us can be wrong. And from time to time we all are wrong – even Emeritus Professors! So be humble, and put the knowledge and know-how you acquire during your studies to assist those around you including those in your Pacific communities.

Have a good symposium.





