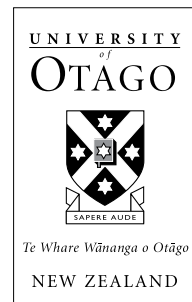
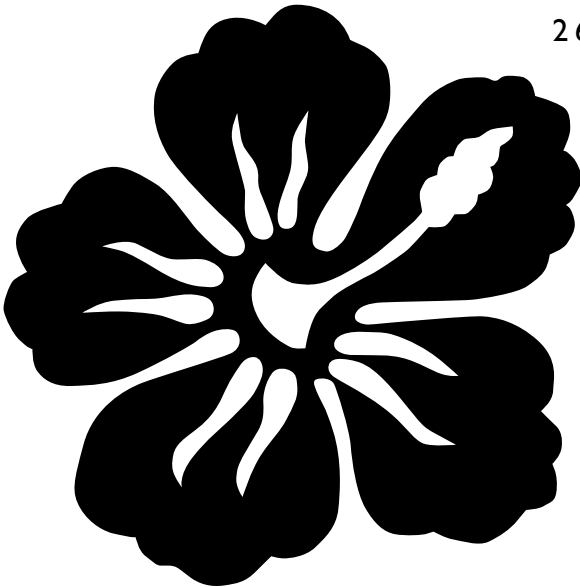

Pacific Voices X

PACIFIC POSTGRADUATE SYMPOSIUM

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Pacific Voices X: Abstracts for the Pacific Postgraduate Symposium

FOREWORD

A warm Pacific welcome to *Pacific Voices X, 2013!* This fabulous event, showcasing research by Pacific postgraduate students, has grown in strength each year. At the University of Otago we are fortunate to have such a talented group of Pacific postgraduates. Their studies make a significant contribution to the research of the University, with widespread application to the Pacific region and beyond. Congratulations to those students whose work features in these Proceedings for the Pacific Postgraduate Symposium. Their research is inspiring, impressive and importantly, it will make a difference.

The participants of *Pacific Voices X, 2013* are all part of a vibrant graduate research community. The postgraduate students and their supervisors push the boundaries of knowledge, bring new ideas, creativity and enthusiasm, boosting the University of Otago's research efforts and culture.

I am sure that readers of *Pacific Voices X* will be impressed and intrigued with the quality and variety of research that is reported in this volume. In 2013 there are over 25 presentations spanning a range of disciplines across the University.

Finally, on behalf of the University, I would like to thank all those responsible for *Pacific Voices X* and in particular Tofilau Nina Kirifi-Alai, and Drs Claire Matthewson, Mele Taumoepeau, Greg Burnett and Nanai Iati Iati.

Professor Rachel Spronken-Smith
Dean, Graduate Research School



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INTRODUCTION

The role of New Zealand in the Pacific region is an important one. Earlier this year, almost 70 MPs and political leaders from across the Pacific participated in the inaugural Pacific Parliamentary and Political Leaders Forum held in Wellington. The goal of the forum was to promote stronger governance, cooperation and political cohesion amongst new and emerging political leaders from the Pacific region and to strengthen relations with NZ parliamentarians.

The Forum concluded with a Call for Action for governments in the Pacific region to do a number of things including:

1. Adopt strategies to meet the challenges arising from climate change.
2. Prioritise primary healthcare, health promotion and disease prevention.

I have singled out these two initiatives from the larger list because, in order to make progress in these areas, additional research is required. A number of our academic and research programmes are making important contributions to understanding climate change in this part of the world and to increasing the health of Pacific Peoples, both here in New Zealand and the other Pacific nations. In addition to these specific research initiatives, 12 different academic programmes at Otago have a strong Pacific focus and at least 18 of our research leaders have interests in some area of research related to the Pacific. Finally, this year, the focus of the 48th University of Otago Foreign Policy School was Pacific Geopolitics in the 21st Century. In short, across all our academic divisions, through our teaching and research, we are making important contributions to the Pacific.

As a nation, New Zealand is increasingly defining itself in terms of its location in the Pacific region. As a University, Otago warmly embraces all the opportunities that come with this evolving definition. Today, the students who will participate in the Pacific Voices Symposium will make their own valuable contribution to our collective aspirations. I wish you the best of luck for a stimulating and engaging symposium.

Professor Harlene Hayne
Vice-Chancellor





MERCY AH SIU-MALIKO

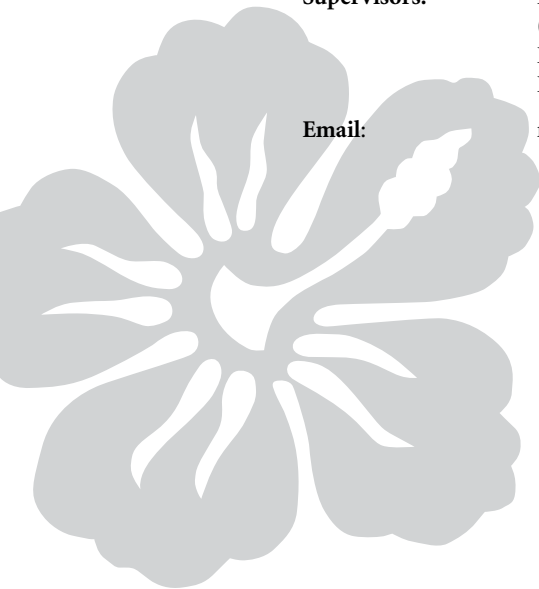
Mercy is a final-year PhD student. She has a BA and BTheol from the University of Auckland and an MTheol from the Pacific Theological College, Suva, Fiji. Mercy is a former lecturer at the National University of Samoa and Coordinator of Weavers Programme of the South Pacific Association of Theological Schools in Suva, Fiji.

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THEOLOGY IN THE SAMOAN PUBLIC SQUARE

Mercy Ah Siu-Maliko

“Public square” refers to settings where people gather to discuss matters of common concern. Examples of the Samoan public square are evident in the church, parliament, media, village council and others that will be mentioned in the content of this paper.

I wish to argue that insights gained from theology have an important contribution to make to the discussion of public issues in Samoan within the Samoan “public square”. In arguing this I will take into account the following: 99.7% of the population of Samoa (according to the 2011 census) are reported as belonging to at least one Christian denomination; Samoa has inherited a Christian culture where its values are grounded in the Christian faith; those who take leadership roles in the state are also leaders in the Church and vice versa; and Samoa’s Constitution is based on Christian principles.

In this presentation, I will briefly examine the context of Samoa in terms of its social structure in order to identify the various participants in public discourse. Attention will also be given to highlighting the issues of the day in Samoa and how they are tackled. To conclude, the discussion will shift to illustrate how theology can contribute to public dialogues on issues such as the building of a new casino and gambling; violence and abuse; and banishment.

Keywords: theology, public square, Christianity, Samoa



PATILA MALUA AMOSA

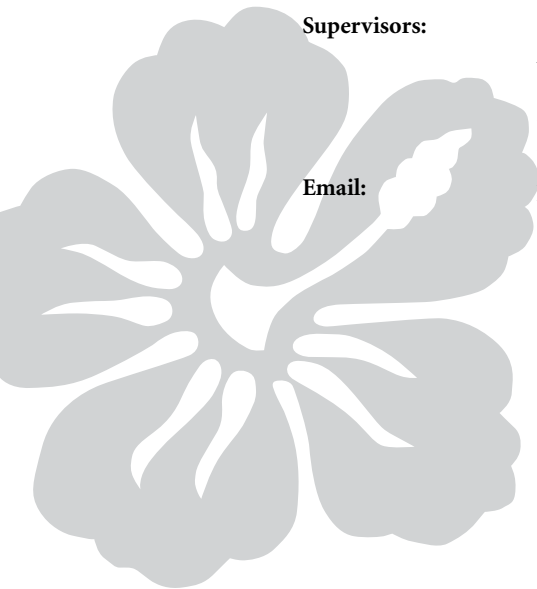
Patila completed her BSc in Chemistry and Biology and DipEd at Flinders University in South Australia. After 12 years' working at the National University of Samoa, she completed a PGDipSci (2005) and an MSc in Environmental Science (2006) at Otago. Funded by a University of Otago scholarship, Patila returned in 2011 for her PhD on the impact of ocean acidification on calcifying organisms.

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DISSOLUTION KINETICS OF CALCIUM CARBONATE – METHOD DEVELOPMENT

Patila Malua Amosa

The skeletons of many marine organisms, including corals, are formed from one of the two calcium carbonate polymorphs, calcite and aragonite. The dissolution rate of these minerals depends on the saturation state (Ω) of CaCO_3 in seawater with $\Omega = [\text{Ca}^{2+}][\text{CO}_3^{2-}]/K'_{\text{sp}}$ and where K'_{sp} is the apparent solubility product of calcite or aragonite in seawater. One of the consequences of rising atmospheric CO_2 levels is decreasing the concentration of carbonate ions due to the uptake of some of the excess CO_2 by the oceans. Thus, changing the marine $[\text{CO}_3^{2-}]$ is predicted to have an impact on these organisms.

One of the major goals of this project was to develop an automated pH-stat system and design a closed-cell titration apparatus to measure the dissolution rate of biogenic calcite and aragonite.

The feasibility of the method and system to produce valid and reliable data was determined by measuring the rate of Iceland spar dissolution in artificial seawater with different Ω values. The measurements were used to calculate the dissolution rate using the empirical rate equation $R = k(1-\Omega)^n$ where k and n are the rate constant and reaction order respectively.

These experiments confirm that, as expected, the apparent rate of dissolution decreased as Ω increased with the rate tending to zero as Ω approached 1. The initial results confirm the efficacy of this method to produce precise and accurate data that will contribute to existing information on the controls of biogenic CaCO_3 dissolution kinetics.

Keywords: calcite, aragonite, saturation state, pH-stat



TAUTALA S ASUAU

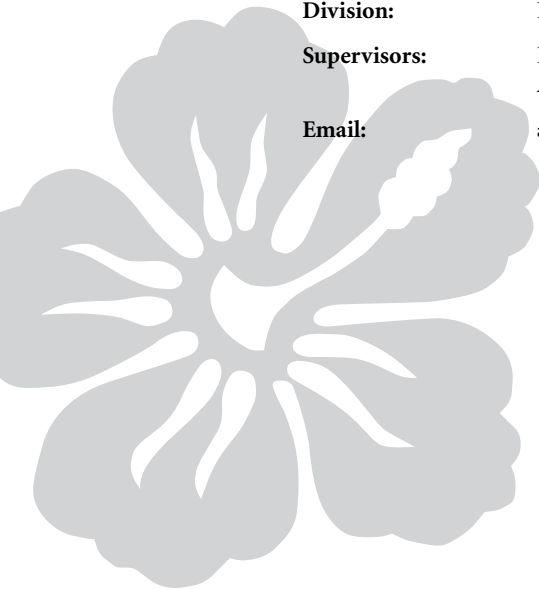
Tautala holds a Bachelor of Arts and Master of Arts in Anthropology (specialising in Archaeology) from the University of Auckland. She is a Samoan, born and raised in Auckland, and during the last six years has been developing and teaching the Archaeology programme at the National University of Samoa. She is on three years' study leave to pursue her PhD.

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AN ARCHAEOLOGICAL EXAMINATION OF THE EARLY PREHISTORY OF SAMOA: A RECONSTRUCTION OF ITS CULTURAL CHRONOLOGY

Tautala S Asaua

A continuing problem in Samoan archaeology is the lack of archaeological data relating to the initial colonisation and settlement of the islands, in spite of recent debates concerning this period.¹ The consensus model is that the Samoan, Fijian and Tongan archipelagos were discovered, and settled rapidly by bearers of the Lapita cultural complex, around 2900 BP. Comparative studies of ceramic assemblages, along with radiocarbon chronologies, have formed the basis for archaeologists to develop a finer-grained cultural chronology for the region.

For Samoa, there are two problems with this model. First, only one Lapita site containing dentate stamped ceramics is known from Samoa, which supports the consensus model: the site of Mulifanua on Upolu. Moreover, the quality of information from Mulifanua is poor, as the site is deeply submerged and our only data were recovered by dredging activities in the 1970s. Thus the current archaeological interpretation of Samoa's early prehistory is not based on the record from Samoa but on the assumption that Samoa followed a course of cultural developments seen elsewhere in the region. Second, and related to this issue, is the problem of geomorphological processes, which suggests other early sites in Samoa² may be obscured as seen with Mulifanua.

Recent archaeological excavations on Apolima Island in Samoa are beginning to provide new data on these issues. This research's primary objective is to continue archaeological investigations on Apolima to define the sequence of the island's occupation, adaptation and land use and to trace the emergence of distinctive Samoan lifeways (e.g. as reflected in settlement patterns). I will use the Apolima data to set out a new model for Samoan prehistory.

Keywords: Lapita colonisation, Samoan prehistory, Mulifanua Lapita site, Apolima Island

-
- 1 Davidson, JM. (2012). Intrusion, Integration and Innovation on small and not so small islands with particular reference to Samoa. *Archaeology in Oceania* 47: 1-13; Addison, DJ & Matisoo-Smith, E. (2010). Rethinking Polynesian origins: A West Polynesian Triple-I model. *Ibid.* 45; Rieth, T & Hunt, TL. (2008). A Radiocarbon Chronology for Samoan Prehistory. *Journal of Archaeological Science* 35: 1901-1927.
 - 2 Dickinson, WR & Green, RC. (1998). Geoarchaeological context of Holocene subsidence at the Ferry Berth Lapita Site, Mulifanua, Upolu, Samoa. *Geoarchaeology* 13: 239-263.



RADILAITE DELAIBATI KI CAMMOCK

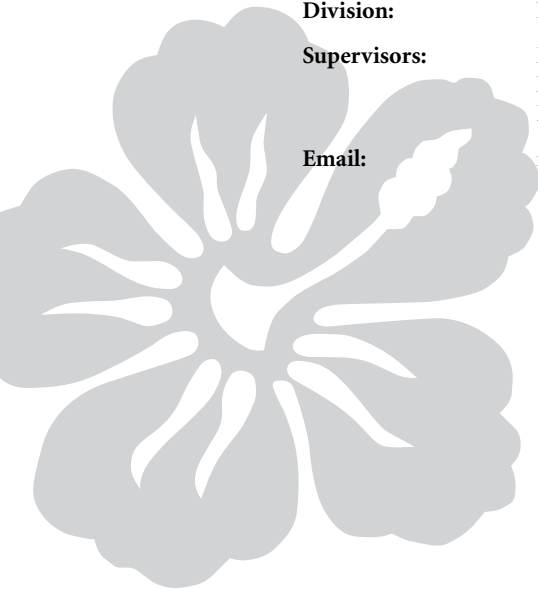
Radilaite is from Fiji. She has a BSc, Diploma and Master's in Public Health from the University of Otago. She is a recipient of an Health Research Council career development award and is currently working towards a PhD in Public Health. Her research interests lie in reproductive and maternal health. Radilaite is also a mother to a 13-month old toddler.

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KNOWLEDGE, ATTITUDES AND PRACTICE OF FAMILY PLANNING OF FIJIAN WOMEN IN FIJI AND NEW ZEALAND

Radilaite Delaibatiki Cammock

Family planning has been recommended by the World Health Organization (WHO) as one of the main services needed to improve the health of mothers and reduce maternal deaths.¹ On average women in resource poor countries suffer greater morbidity and mortality as a result of pregnancy.² In spite of these disparities, literature on women's family planning in resource poor countries, such as in the Pacific, is lacking. Due to the degree of social and cultural influences in the lives and decisions of Pacific women, research into the perceptions, attitudes and practices of family planning is needed to determine access and barriers to family planning services.³ Not only is there a need for such research in Pacific island countries but also in countries where many Pacific people migrate.

This study focuses on Fijian women living in Fiji's central division and major cities in New Zealand. It assesses the knowledge, attitudes and practices of family planning amongst Fijian women in both countries who are 18 years old and over. The study uses a mixed method approach through the use of a cross sectional survey and focus groups. It aims to identify influences in the uptake of services and provide information that will lead to effective targeting and implementation of family planning services in Fiji and New Zealand.

Keywords: family planning, contraception, maternal health, Fijian women

1 WHO (2004). *Maternal Mortality in 2000; estimates developed by WHO, UNICEF and UNFPA*.

2 WHO (2004). *Maternal Mortality in 2000; estimates developed by WHO, UNICEF and UNFPA*; WHO (2009). *Maternal Health*. http://www.who.int/topics/maternal_health/en/.

3 Jameson, A., Sligo, F., & Comrie, M. (1999). Barriers to Pacific women's use of cervical screening services. *Australian and NewZealand Journal of Public Health* 23,89–92.



MARSA DODSON

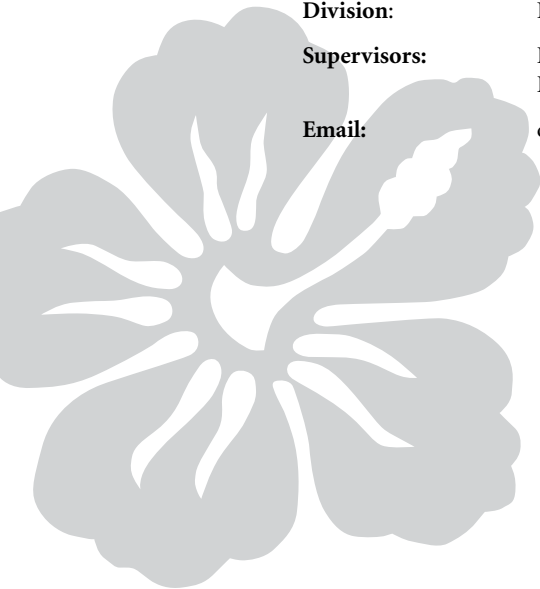
Marsa is an international doctoral student from the United States. She graduated in Law and Justice from Central Washington University and has a Master of Social Work from the University of Washington. Marsa's PhD from the University of Otago (Department of Social and Community Work) was for her study of Mangaia's practice of *tamariki 'āngai* or informal adoption.

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MIXED BLESSING: ORAL HISTORIES OF THE WAR CHILDREN BORN TO US SERVICEMEN AND INDIGENOUS COOK ISLANDERS

Marsa Dodson

During World War II several thousand American servicemen were stationed in Aitutaki and Tongareva, Cook Islands, to protect the supply route from the United States to Australia. They were away from the heat of combat with the Japanese although they maintained their readiness in case the enemy encroached. During this friendly occupation, some intimate relationships developed between the soldiers and women whom they were forbidden to marry. Even so, these liaisons resulted in the birth of over 60 children. My research is about what the influence of having a foreign and absent father meant to the war children throughout the lives of the war children.

To accomplish my study, I located many of the children and recorded their oral histories. I use qualitative methods with an ethnographic approach and emphasis on preserving the voices of my informants. My outcome resembles a blend of anthropology, sociology and social work which reflects my background and personal interest. My data indicate that the war progeny received a strong Cook Islander identity from their maternal families. Their experiences indicate that being a mix of Islander and American did not result in a loss of land entitlements from their mother's line; however, they missed out on inheriting from their birth fathers. Many of the war progeny never found their fathers, and now their own children and grandchildren are interested in their missing identity.

Keywords: mixed-race, illegitimate, stigma, identity



**JACQUELINE FRANCES FA'AMAILE LAFALAF
FA'AMATUAINU**

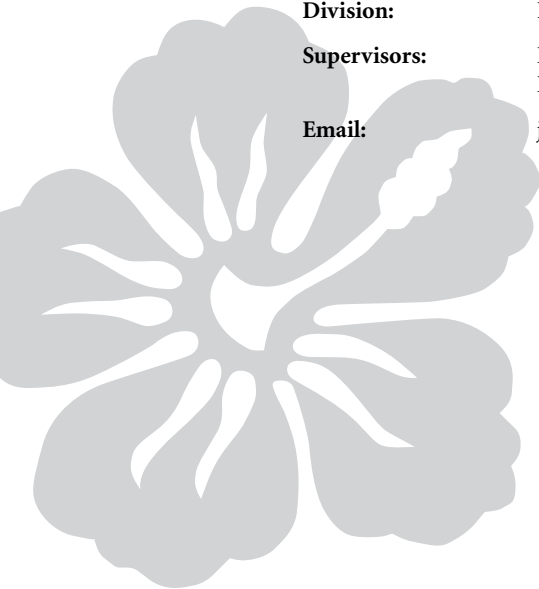
Jacqui holds a Master of Indigenous Studies degree from the University of Otago, focused on how Pacific Small Island Developing States (SIDS) interpret the Principle of Common but Differentiated Responsibilities (PCDR). She is now a PhD student at the University of Auckland.

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CLIMATE LAW IN THE PACIFIC: AN ENQUIRY INTO THE RHETORIC OF RESPONSIBILITY AND RESPONSIVENESS UNDER SUSTAINABLE DEVELOPMENT

Jacqueline Frances Fa'amaile Lafalafa Fa'amatuainu

This research considers the prospects for creating climate law in the context of Pacific Small Island Developing States (SIDS) and how SIDS are participating in the climate regime. This includes the combination of institutions, processes and laws to meet the objectives of the *United Nations Framework Convention on Climate Change* (UNFCCC). The research offers two perspectives: a normative application of differential treatment *and* a policy outcome perspective on the effectiveness of climate law in achieving sustainable development. Accordingly, the research examines whether the existing climate change dialogue requires an alternative ethic of responsibility.¹ This research will engage a narrow discussion within the climate justice debate to determine ways to integrate climate change into SIDS environmental frameworks,² thereby putting into context the historical rationale that developed countries must take the lead in the climate change problem with SIDS making a limited contribution to the global effort.

Climate law is a complex web of development initiatives, targets and support mechanisms favouring developing countries. This derives from an understanding that different countries require different rights and responsibilities. I will confine this inquiry to a critical examination of the *UNFCCC*, *Kyoto Protocol*, *Bali Action Plan*, *Copenhagen Accord*, *Cancun Adaptive Framework*, and *Conference of the Parties* decisions. As all measures and policies operating within the climate law regime reinforce and build upon theoretical boundaries, this research will draw on Sands & Rawls' principles of justice³ as well as the special situation of SIDS in developing a legislative roadmap for climate law in the Pacific.

Keywords: climate law, Small Island Developing States (SIDS), sustainable development, ethic of responsibility

- 1 Rajamani, L. (2000). The Principle of Common but Differentiated Responsibility and the Balance of Commitments under the Climate Regime. *Review of European Community and International Environmental Law*, 9(9), 121, 127, 158; Rajamani, L. (2005). The Nature, Promise, and Limits of Differential Treatment in the Climate Regime. *Yearbook of International Environmental Law*, 16(1), 81, 86.
- 2 Posner, E. & Weisbach, D. (2010). *Climate Change Justice* (pp. 10-40). Princeton: Princeton University Press.
- 3 Rawls, J. (1971). *A Theory of Justice*. Cambridge, Mass: Belknap Press of Harvard University Press; Sands, P. (2012). *Principles of International Environmental Law* (3rd ed). Cambridge: Cambridge University.



ALLAMANDA FAATOESE

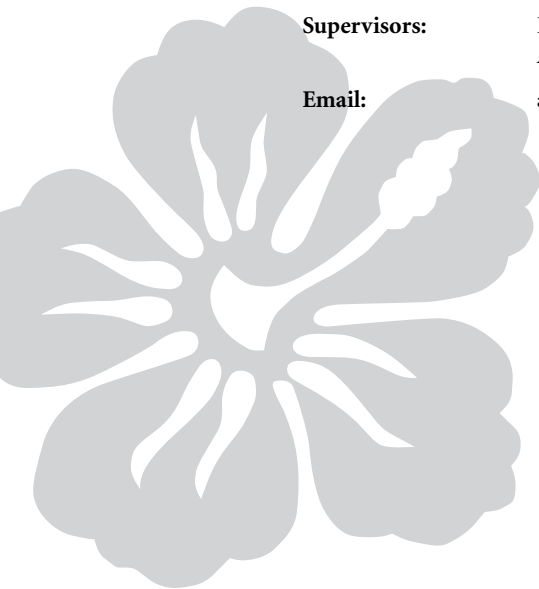
Allamanda Faatoese is a New Zealand-born Samoan from Dunedin. She completed her BSc (in Biochemistry) at the University of Otago and then worked in diagnostic and research laboratories across New Zealand before embarking on postgraduate studies at the University of Otago, Christchurch. Allamanda completed her PhD in 2013.

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SCREENING FOR CARDIOVASCULAR DISEASE: A COMPARISON OF MĀORI AND NON- MĀORI RISK PROFILES

Allamanda Faapea Faatoese

Māori, the indigenous population of New Zealand, have poorer cardiovascular health outcomes than non-Māori. To understand these disparities further, the Hauora Manawa Study was designed to assess prevalence of CVD and associated risk factors, to identify objective markers of CVD risk and to monitor interventions and associated outcomes within rural Māori, urban Māori and urban non-Māori communities. The scope of this thesis was concurrently to compare baseline cardiovascular risk factor profiles and potential biomarkers of these diverse cohorts.

A total of 252 rural Māori, 243 urban Māori and 256 urban non-Māori participants, randomly selected from the Electoral Roll and aged 20 – 64 years, attended screening. Demographic, personal and family medical history, lifestyle factors, access to healthcare, socioeconomic status, established and potential biomarkers were evaluated.

Our findings illustrated a clear gradient of CVD risk factors with rural Māori having greater cardiovascular risk compared with their urban counterparts, despite high engagement with primary health services across all cohorts. Overall, rates of previously diagnosed cardiac history were comparable; however, salient risk factors common to rural and urban Māori were higher BMI, current smoking, type 2 diabetes (T2DM), hypertension (HTN) and dyslipidaemia (DL). Rates of treatment were comparable between the cohorts, yet achieving therapeutic targets were suboptimal, particularly for blood pressure, total cholesterol and LDL-cholesterol. Rural Māori with T2DM had poor glycaemic control. Undiagnosed HTN and DL rates were comparable across the cohorts.

In conclusion, this study showed that elements of cardiovascular profiles differed between rural and urban Māori cohorts, yet the burden was greater than in non-Māori. Opportunistic and early screening of CVD risk factors and effective management of risk factors are critical in order to reduce the cardiovascular burden among Māori.

Keywords: cardiovascular disease, risk factors, metabolic, Māori



ETISONE GAFA

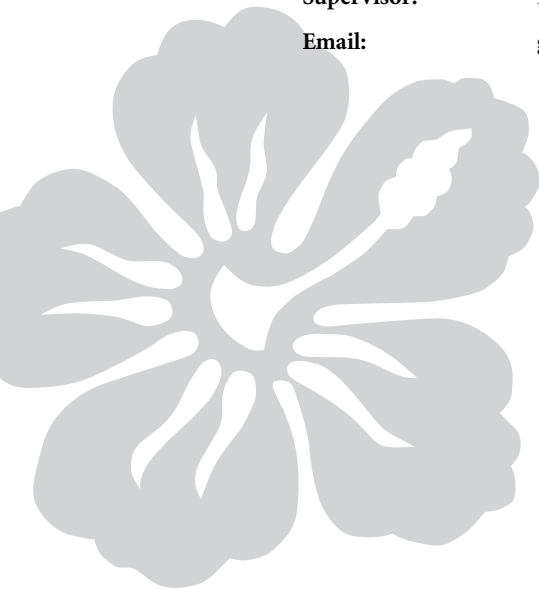
Etisone is an ordained minister of the Congregational Christian Church of Samoa (Ekalesia Faapotopotoga Kerisiano Samoa, EFKS). For the past 20 years, he has worked for EFKS in Jamaica and Auckland, accompanied by his wife Henrietta and their four children. He is currently undertaking a Master of Ministry degree.

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CHURCHES FOR SECOND GENERATION ASIAN MIGRANTS IN NORTH AMERICA AND WHAT THEY MIGHT TEACH NEW ZEALAND CHRISTIANS FROM THE PACIFIC ISLANDS

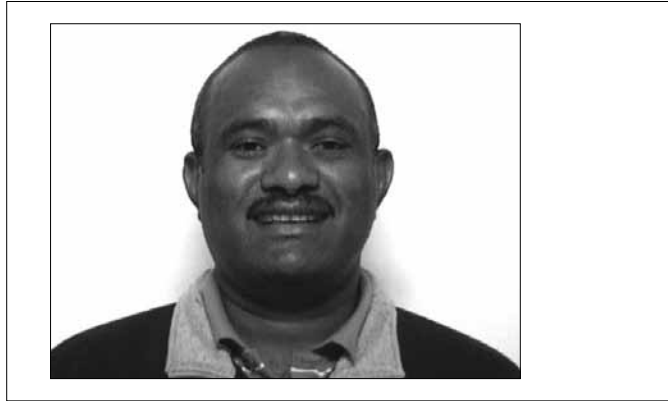
Etisone Gafa

Despite the spectacular growth of Asian Churches in the United States, many second generation members are leaving traditional churches to form their own. According to Sharon Kim, “The second generation ... began to vocalize discontent over the immigrant churches, which they felt catered primarily to the needs of their parents’ generation.”¹ Rather than assimilating into American evangelical churches or inheriting the churches of their immigrant parents, second generation migrants are creating their own. Their church services are conducted in English and the members are young, mostly the children of immigrants who came to America after 1965.

This research identifies and investigates what second generation Asian Americans do after leaving their parents’ Church, in order to draw lessons for Pacific Island churches in New Zealand. Thus far, results suggest that the second generation Korean Americans are fashioning a faith of their own, wanting their voices nurtured and heard. Second generation churches, particularly in the current period of transition, experimentation and innovation provide a colourful and intriguing case study of how ethnic minorities can and do transform the practice and institutional landscape of religion in America. By creating a faith of their own, second generation Korean Americans are declaring that in today’s society, there are hybrid third spaces to inhabit. What lessons can be drawn from this experience and applied to Pacific Island churches in New Zealand?

Keywords: church, migrants, America, Asian, Pacific

1 Kim, S (2010). *A Faith Of Our Own: Second Generation Spirituality in Korean American Churches*. New Brunswick, NJ: Rutgers University Press. p. 26.



RATU OSEA GAVIDI

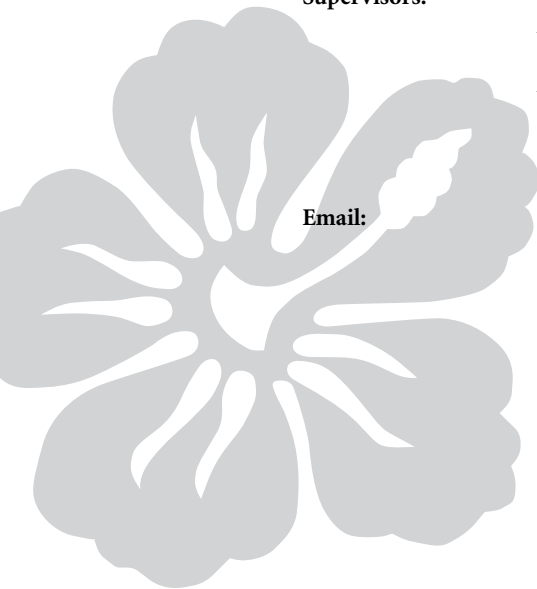
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COMPARING THE PREVALENCE OF ORAL CANCER IN FIJI AND NEW ZEALAND (2000-2010)

Ratu Gavidī, Alison Rich, Brian Cox and Temalesi King

Despite numerous studies on the prevalence of oral cancer in geographically diverse populations, there are no detailed data analyses on their incidence in Fiji. The most recent analysis for New Zealand was in 1995.

This study compares the differences in prevalence of oral squamous cell carcinoma (OSCC) in Fiji and New Zealand to determine differences in variables such as gender, age groups affected and site of tumour. It relies on oral cancer data between 2000-2010, which were obtained from the Cancer Registry of New Zealand, the Cancer Registry of the Fiji Islands, Medlab Dental Oral Pathology Diagnostic Service, University of Otago, and Histology Departments at the three main referral hospitals in Fiji. Between 2000-2010, a total of 1916 and 124 OSCC registered cases were retrieved and eligible for the study in New Zealand and Fiji consecutively.

The results show that the prevalence of OSCC in 2005 was 4.2 per 100,000 in New Zealand and 1.3 per 100,000 in Fiji. Further, 64.9% were New Zealand men and 35.1% were women (1.8:1), whilst in Fiji there was no difference between both genders (M to F ratio 1: 1). The overall mean age at diagnosis was 63 years in New Zealand and 57 years in Fiji. The tongue was the most commonly affected site for the Fiji population (73.4%) but only accounted for 43% of OSCC amongst New Zealanders. Although there are differences in the demographic variables relating to OSCC in the two countries, these observations are useful in targeting prevention strategies in both.

Keywords: oral, squamous, carcinoma, prevalence



SETH GORRIE

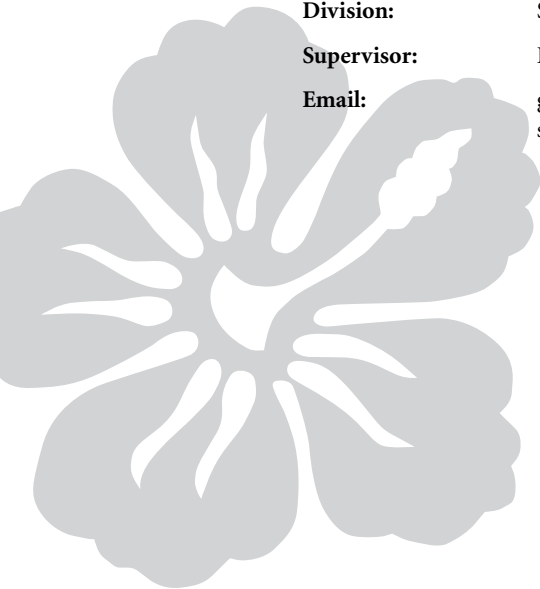
Seth is of Samoan descent. Born and educated in Christchurch, he was drawn to Dunedin as an inaugural recipient of the University of Otago Māori and Pacific Island Entrance Scholarship in 2006. He has a BSc and recently completed (in 2012) an MSc in Geography as a recipient of a University of Otago Pacific Island Master's Scholarship. Seth is now a GIS Consultant with Esri Australia based in Melbourne.

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OUT OF SIGHT AND OUT OF OUR MINES

Seth Gorrie and Alaric McCarthy

This research aims to provide an overview of current debates regarding seabed mining in Pacific Island Countries (PICs) and territories. In order to assess the potential impacts seabed mining could have on the economic, social and environmental sustainability of PICs it is important to understand the drivers behind this form of mineral extraction in the Pacific Islands region. Recent demand for renewable energy technology has increased due in part to global ambitions to mitigate greenhouse gas emissions and increase the share of energy contributed from renewable sources. The present phase of renewable energy development in the Pacific presents some significant challenges associated with understanding the scientific and cultural parameters of success.¹ In addition, global demand for renewable energy technologies poses an additional threat to PICs through proposed sea bed mining. This threat stems from the 'green technology' sector's reliance on terrestrial deposits of rare earth materials such as copper, silver and palladium that are increasingly becoming scarce resources. Many of the rare earth materials used to manufacture wind turbines and solar panels, for example, can be found within the Exclusive Economic Zones (EEZ) of PICs as seabed deposits. The presentation will outline sea bed mining proposals in the Pacific and discuss the implications the rise of renewable energy development could have on our region.

Keywords: renewable, energy, development, Samoa

1 Gorrie, S. J. (2013). The scientific and cultural aspects of renewable energy development success in Samoa: *Mai le Tunoa i le Masini – From Umu to Machine* (Thesis, Master of Science). University of Otago: pp. 179.



MARA KAWEHIWEHI MAULIOLA HOSODA

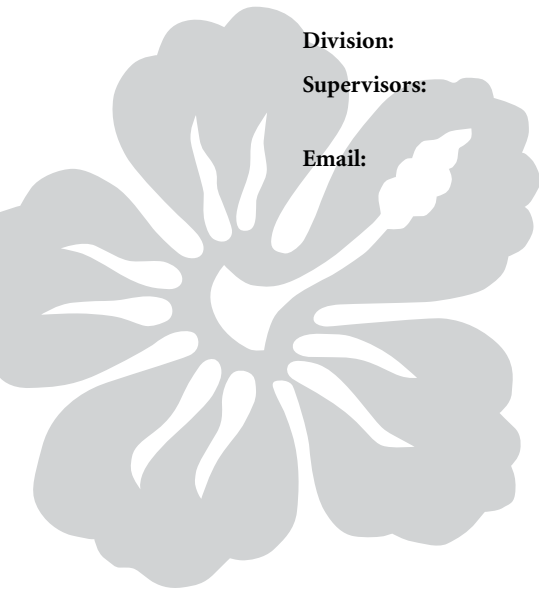
Mara is Hawai'ian-Japanese. She completed a BA(Hons) at Occidental College (USA) and an MA at the University of Otago. Currently she is an Assistant Research Fellow in the Māori Indigenous Health Institute at the University of Otago Christchurch School of Medicine & Health Sciences. She is completing a PhD supported by an Otago Pacific Island Doctoral Scholarship.

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EVALUATING EQUITY PROGRAMMES AND ACTIONS TAKEN BY NEW ZEALAND LAW SCHOOLS FOR PACIFIC LLB STUDENTS

Mara Kawehiwehi Mauiola Hosoda

Across all law schools in New Zealand, Pacific law student completion trends remain below the general New Zealand population. Therefore the research question for this project is “What are the effects of equity programmes in New Zealand law schools for Pacific LLB students?” A comparative study design was used with case studies from six universities. Working within a *Teu Le Va* methodology, this research took a mixed methods approach collecting data from historical documents, university statistics, and interviews from students and staff in order to capture a full view of the effects from both the “top down” and “ground up”. All three data sets were triangulated and analysed across the six schools to gauge retrospectively the impact and effects of equity programmes.

Findings indicate Pacific enrolment trends were positively influenced by entry schemes, tutorials, and support staff based within the law school, while Pacific completion trends were positively influenced by direct entry schemes and support staff. However, equity programmes at all law schools were flexibly and inconsistently implemented from year to year. Law school scholarships, Pacific conferences, and Pacific legal studies papers were offered sporadically and thus did not create any noticeable trend in Pacific enrolment or completion. Major persistent thematic challenges identified by participants were the authoritarian, commercial, elitist, individualistic, linguistic and irrelevant nature of law and law school.

Findings also indicate that enrolment and completion rates could be increased by the introduction of summer bridging programmes, research internships, culturally relevant work experience options during legal studies and increasing the number of legal academic staff of Pacific ethnicity.

Keywords: Pacific students, law school, legal education, equity programmes



IRENE KARONGO HUNDLEBY

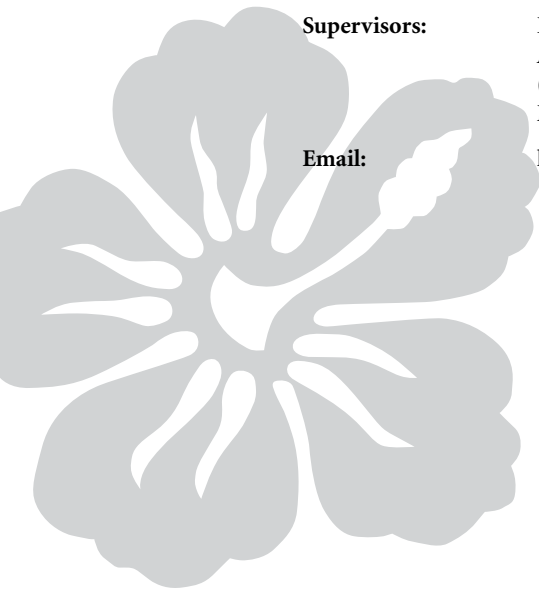
Irene recently graduated with a Bachelor of Music from the University of Otago and is now studying Composition and Ethnomusicology for her MusB(Hons). Irene is a recipient of the 2013 Pacific Island Bridging Scholarship and was awarded the Jennie Macandrew Prize in Music in 2010. Irene is of New Zealand and Solomon Island descent.

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KASTOM LO LAST YESTADAE GO KASIM NAO: CASE STUDIES IN MALAITAN WOMEN'S MUSIC

Irene Karongo Hundleby and Jennifer Cattermole

This dissertation aims to document and analyse the musicological aspects and the visual, physical, emotional and socio-cultural aspects of traditional women's vocal music from Malaita, Solomon Islands. Music recordings from Malaita have been selected as case studies and analysed using musicological and ethnomusicological methods to present a snapshot of traditional women's vocal music over the period 1969 – 2012.

This is the first study to look specifically at Malaitan women's music, and to compare and contrast women's music-making in different geographical and historical contexts. This is also the first music project on Malaita to be written from a bicultural perspective. Researchers have been recording Malaitan music since the 1960s; however, no formal analysis of Malaitan women's music has been done before.

The research included interviews with diasporic Malaitans to explore the context and functions of each song, and to discuss translations and societal changes. The human ethics application process undertaken prior to conducting these interviews highlighted the problems associated with translating unfamiliar concepts from New Zealand to Solomon Island cultures and vice versa.

Irene's findings suggest that there has been a change in the musical language used in local songs across all the regions studied. Some songs show dynamic change in local languages. Many songs are said to be in 'old languages' that correlate with the 'old beliefs' of *kastom*. Irene wishes to continue work in this area with an explorative study into the Malaitan understandings of musical meaning.

Keywords: women's music, Malaita, Solomon Islands, ethics translation



MINO'AKA KAPUAHIWALANI-FITZSIMMONS

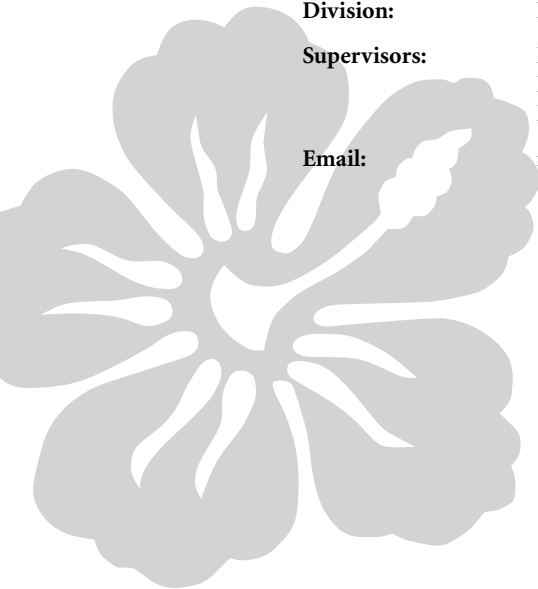
Mino'aka is an indigenous Hawaiian completing a Master of Health Sciences degree at the National Addiction Centre, University of Otago, Christchurch. She holds a BA in Psychology from the University of Hawai'i at Manoa. Mino'aka is currently a clinical therapist with Pai Ake Solutions in Kirikiriroa (Hamilton).

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CRITICAL SUCCESS FACTORS IN KAUPAPA MĀORI AOD RESIDENTIAL TREATMENT: MĀORI YOUTH PERSPECTIVES

Mino'aka Kapuaahiwalani- Fitzsimmons

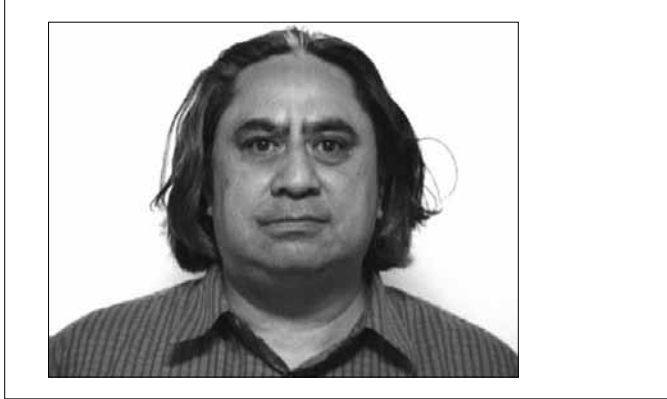
There is a significant gap in the research literature regarding issues related to Rangatahi Māori alcohol and other drug (AOD) residential treatment. Historically, the majority of residential AOD treatment services for adolescents have been modeled on adult treatment services which paid little attention to the developmental and cultural needs of indigenous youth. This omission has often left indigenous youth with no alternative but to attend mainstream services, in which they may feel culturally alienated.

The current research looks at what Rangatahi Māori, who have accessed a kaupapa Māori AOD youth residential treatment service, perceive as the critical success factors in their treatment. Understanding these perspectives will help better inform the future design and implementation of AOD residential treatment for Rangatahi Māori.

Qualitative semi structured individual interviews were conducted with 10 Rangatahi Māori, employing a kaupapa Māori framework. Participants were randomly selected from the 65 youth who attended Rongo Atea in 2009. Participants were asked a set of questions about what they thought worked for them while in treatment; what helped them to make any significant changes to their substance use, mental and emotional wellbeing, and general personal and social development.

Emerging results confirm that cultural interventions that are holistic, work with the young person where they are at, and that encompass a broad range of areas, help to support Rangatahi in their recovery. In addition, the results highlight the importance of including youth voices in the development and design of AOD services, especially in assisting to improve access and retention.

Keywords: Māori, youth, alcohol, drug, treatment



JESSE KOKAUA

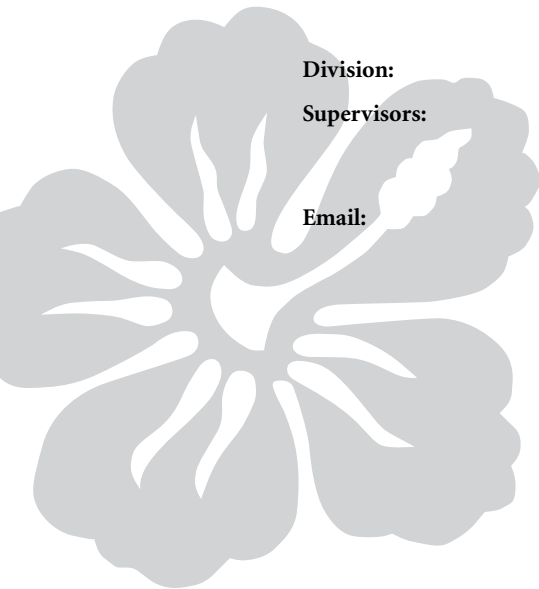
Jesse is a Cook Islander living in Dunedin. He is working on his PhD involving an application of Bayesian statistical models to analyse prevalence of mental disorder and service use patterns among Cook Islanders in New Zealand. He also works for the Pacific Islands Research and Student Support Unit.

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MENTAL DISORDER, TREATMENT AND UNTREATED RECOVERY AMONG COOK ISLANDERS IN NEW ZEALAND

Jesse Kokaua

The aim of this talk is to present a summary of prevalence and lifetime risk of mental disorder and time to treatment or recovery without treatment among Cook Islanders in New Zealand.

Several Bayesian model based analyses have been used to estimate 12-month and lifetime prevalence and cumulative lifetime incidence of mental disorder and time to treatment or recovery.

This study investigates patterns of mental disorder among Cook Islanders as well as factors that explain their risk differentials compared with people from other ethnic groups. It looks into treatment seeking over the course of their lifetime by those with a mental disorder and also recovery from a disorder without treatment. Finally it looks at patterns of use by Cook Islanders of Government funded specialist mental health services.

Cook Islanders have come to New Zealand from a home where mental disorder is foreign both conceptually and in terms of prevalence. They display high prevalence of mental disorder, especially among those born in New Zealand, but only moderate use of treatment services compared to others. At certain ages there are a large number of people with disorder who remain untreated. There is also comparatively low use of government funded specialist mental health services. The lowest use appears to be in areas of low socio-economic status that are coincidentally areas of high Pacific settlement in New Zealand. A concern is that the burden of mental disorder among Cook Islanders not seen by the specialist mental health system is either transferred to other parts of the health system or less desirably to the community itself.

Keywords: Cook Islanders, Pacific mental health, mental health service, Bayesian regression models



SHIVANJALI J LINGAM

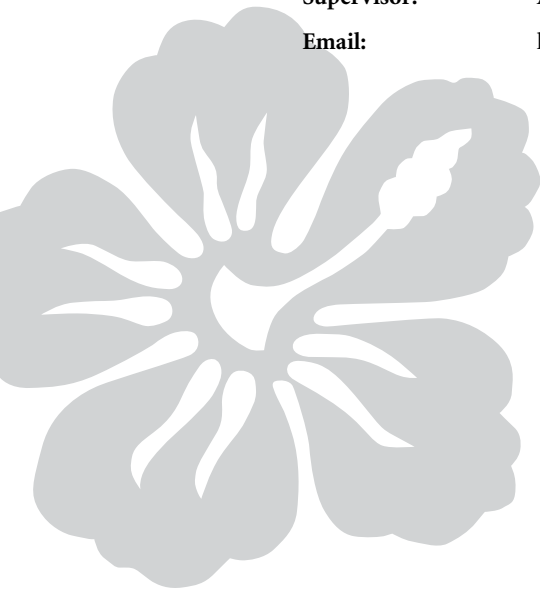
Shivanjali is from Fiji. She holds a Bachelor of Biomedical Sciences degree and a Postgraduate Diploma in Science from the University of Otago. She recently completed a Master of Science degree in Physiology and was a recipient of a University of Otago Pacific Island Master's Scholarship for 2012.

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AKT1 REGULATION OF COMMD PROTEINS

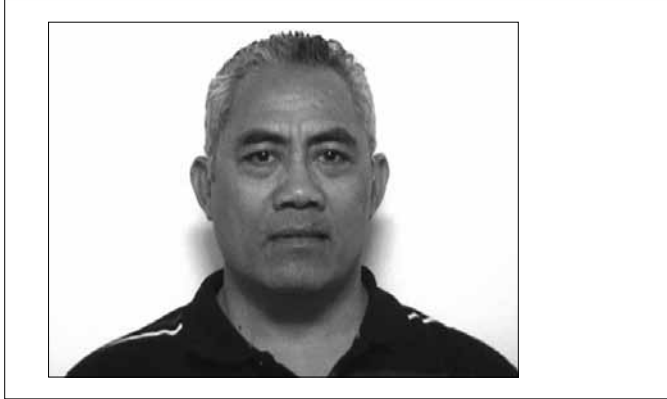
Shivanjali J Lingam

The v-akt murine thymoma viral oncogene homologue (Akt1) is an important serine/threonine kinase that has been indicated to have a potential function in the regulation of epithelial sodium channel (ENaC) which is required for correct sodium homeostasis and blood pressure control. In the kidney collecting ducts, Akt1 is increased in response to aldosterone and insulin and this most likely leads to increased transepithelial sodium re-absorption through the ENaC. The Copper Metabolism Murr 1 Domain-containing proteins 1 and 9 (COMMD1 and COMMD9) have been recently identified novel negative regulators of ENaC and speculated to interact with Akt1. Therefore, it is hypothesised that COMMD1 and COMMD9 will interact with Akt1 and promote the protein stability of Akt1.

To examine the relationship between COMMD1 and COMMD9 with Akt1, stability assays were used in two different cell lines and western blotting analysis was performed. The experimental data revealed that both COMMD1 and COMMD9 exerted a destabilising effect on Akt1 in both cell lines. In all cases, COMMD1 or COMMD9-mediated destabilisation on Akt1 was not dose-dependent.

In summary, this study demonstrated that COMMD1 and COMMD9 reduce the stability of Akt1. This suggests that COMMDs may function as adaptor proteins for Akt1 E3 ligases and enhance Akt1 ubiquitination modification and degradation. Therefore, the regulatory effect of COMMD1 and/or COMMD9 on Akt1 may have implications, such as enhanced or inhibited Akt1 activity, for vital cellular processes such as the renal system.

Keywords: Akt1, COMMD1, COMMD9, ENaC



SELOTA MALIKO

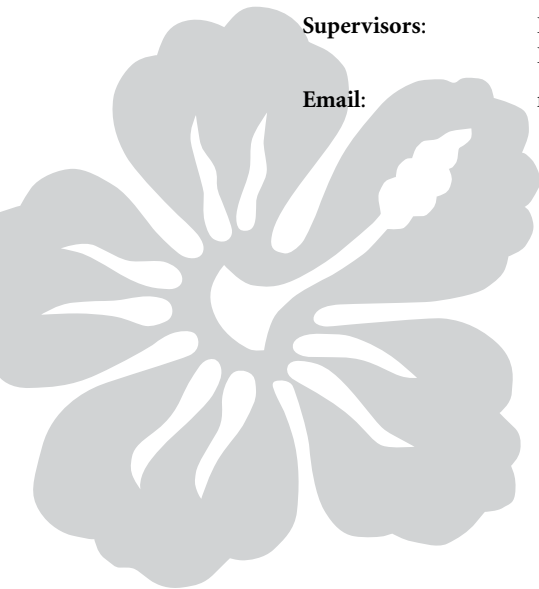
Selota is an ordained minister of the Methodist Church of Samoa, with a Bachelor of Divinity with Honours and a Master of Theology from the Pacific Theological College, Fiji. A former lecturer at Piula Theological College, Samoa, Selota is pursuing a PhD in Pastoral Theology, on a University of Otago Pacific Island Doctoral Scholarship.

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SAMOANS' EXPERIENCES OF FA'ATE'A MA LE NU'U (BANISHMENT)

Selota Maliko

The use of banishment in traditional Samoan society was assumed to maintain peace, harmony and order among the villagers.¹ However, its practical application appears to be an assertion of chiefly power and control over members of the village. As a result, huge numbers of people were banished regularly. Those who were banished were always expelled from their villages for a specific period of time or even for life.

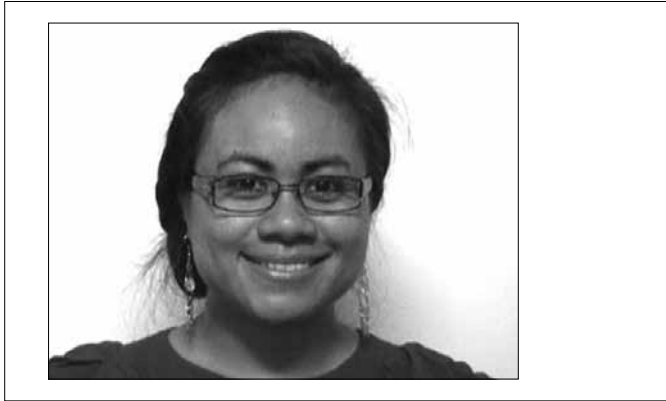
The main findings in this research support the concept of banishment as a legitimate cultural practice at the community level based on the following understandings: the elimination of violence and crimes within the village community; a disciplinary action against the serious offenders; and a means to maintain peace and upholding the traditional boundary or relationship of respect. At the same time, criticism of the practice of banishment has emerged at the personal level, where it is seen as a violation of fundamental human rights and freedom – the abuse of power by those in authority and an inhumane treatment of people.

The impacts of banishment have appeared at three main levels: the community level, the religious/church level, and the personal level.

This discussion provides an overview of the various experiences of those who support the practice and those who reject it. Examples of actual case studies will be included in the narrative to illustrate the reasons behind the participants' views.

Keywords: banishment, respect, human rights/freedom, power

1 Care, J. (2006). A Green Stick or a Fresh Stick? Locating Customary Penalties in the Post-Colonial Era, *Oxford University Commonwealth Law Journal* 6, 27-60.



MELBOURNEMOCKBA COUPDETALEI MAUILIU

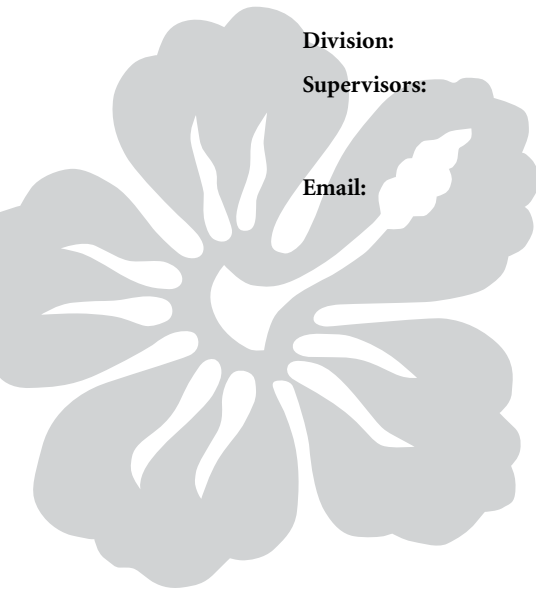
Melbourne is from Samoa and holds a Bachelor of Science in Anatomy and Structural Biology (2011) and a Postgraduate Diploma in Public Health (2012), both from the University of Otago. She is currently completing her Master of Public Health qualification courtesy of the Injury Prevention Research Unit and a Ministry of Health Pacific Workforce Development Award.

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OUTCOMES FOR PACIFIC PEOPLES FOLLOWING INJURY

Melbourne Mauiliu, Sarah Derrett, Ari Samaranayaka, Faafetai Sopoaga, Jesse Kokaua and Gabrielle Davie

In New Zealand, both injury and disability have been identified as concerns for Pacific peoples. The Prospective Outcomes of Injury Study (POIS) has collected information about a range of outcomes following injury in New Zealand. This study provides information about a range of hitherto unknown outcomes following injury for Pacific peoples in New Zealand, and suggests areas of possible focus for health and rehabilitation service providers and policy-makers interested in improving outcomes for injured Pacific peoples. It has two objectives: to describe the pre-injury characteristics of Pacific participants (n=239) and compare these with non-Pacific (n=2611) participants, and to compare their outcomes three months after injury.

Participants were selected from injured New Zealand residents aged 18-64 years who were referred to the Accident Compensation Corporation's injury entitlement claims register. The analyses compared pre-injury and injury-related characteristics of Pacific and non-Pacific peoples and assessed the relative risks for various outcomes.

The adjusted relative risks (aRR; 95% confidence intervals) for Pacific peoples, with the non-Pacific group as the reference, indicate the following results: Pacific peoples were less likely to have no/lesser problems with disability (aRR=0.82; 0.70,0.95); less likely to have no problems with EQ-5D self-care (aRR=0.88; 0.80,0.98); less likely not to report EQ-5D anxiety/depression (aRR=0.84; 0.76,0.93), and less satisfied with social relationships three months after injury (aRR=0.89; 0.83,0.95). No differences in risk were apparent for the remaining seven outcomes including being in paid employment. Analysis is currently underway for 24-month outcomes post-injury for the Pacific cohort.

Keywords: cohort study, Pacific peoples, early injury outcomes



ELLEN MILLER

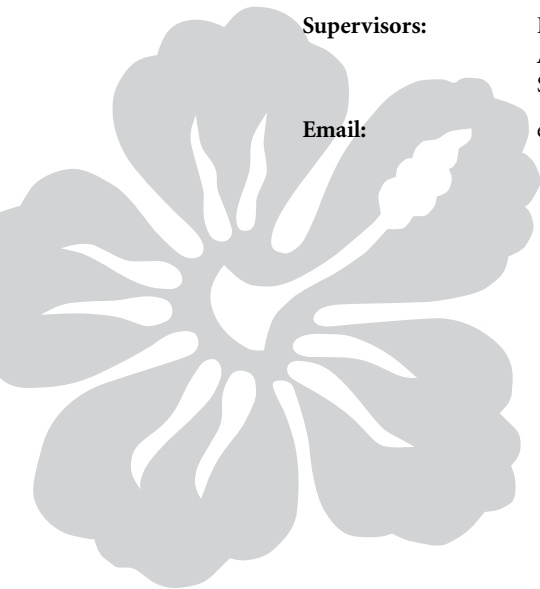
As a Master of Science candidate at Otago, Ellen spent her research season at the University of the South Pacific in Fiji. She holds a BSc in Biology from Butler University in the United States. Her interests include human impact on coastal marine systems and spreading awareness of marine conservation issues. Ellen submitted her thesis in late June 2013.

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DOES NUTRIENT ENRICHMENT CONTRIBUTE TO CORAL BLEACHING? A FIJIAN CASE STUDY

Ellen Miller

Coral reefs, one of Earth's most productive and diverse ecosystems, have recently witnessed precipitous declines in their health and global coverage, chiefly through 'coral bleaching.'¹ Healthy corals are vibrantly coloured and receive most of their energy from symbiotic algae (*Symbiodinium* spp.) residing in their tissues.² Unfavourable environmental conditions cause corals to expel these algae (resulting in a whitened or 'bleached' appearance), which can dramatically reduce the corals' ability to feed, threatening the mortality of the coral colony.³ Warming oceans are known to trigger coral bleaching events;⁴ however, new evidence suggests that land-based nutrient runoff may increase coral sensitivity to thermal stress, thereby causing bleaching events to occur at lower temperatures.⁵ The aim of this research was quantitatively to assess the combined impact of nutrient enrichment and heat stress on the physiological and photosynthetic response of a dominant, reef-building coral in Fiji.

Porites cylindrica corals were collected from Votua, Fiji, placed in individual mesocosms, enriched with various concentrations of labelled nitrate (¹⁵NO₃), and gradually heated above the identified bleaching threshold⁶ for Fijian corals. Stable isotope values and algal cell counts confirmed that ¹⁵NO₃ had a significant impact on algal populations, and demonstrated rapid uptake and cycling of nutrients between algae and coral host. While no visual bleaching events were observed in this experiment, there was a tendency for corals in highly enriched seawater to lose proportionately more symbiotic algae than control samples after exposure to heat stress, suggesting greater potential for bleaching events in nutrient-enriched waters.

Keywords: coral bleaching, nutrient enrichment, *Porites cylindrica*, Fiji

1 Hoegh-Guldberg, O. (1999). Climate change, coral bleaching and the future of the world's coral reefs. *Marine Freshwater Research*, 50, 839-866.

2 Ibid.

3 Ibid., p. 842.

4 Ibid., p. 843.

5 Wooldridge, S.A. and Done, T.J. (2009). Improved water quality can ameliorate effects of climate change on corals. *Ecological Applications*, 19(6), 1492-1499.

6 Cumming, R.L., Toscano, M.A., Lovell, E.R., Carlson, B.A., Dulvy, N.K., Hughes, A., Koven, J.F., Quinn, N.J., Sykes, H.R., Taylor, O.J.S., and Vaughn, D. (2002). Mass coral bleaching in the Fiji Islands, 2000. *Proceedings of the Ninth International Coral Reef Symposium*, Bali. 2, 1161-1169.



JARROD TOLUONO MOORS

Jarrold is of Samoan descent – born in New Zealand and raised in Samoa. He holds a Bachelor of Science degree and a Postgraduate Diploma in Science, both in Anatomy, from the University of Otago. He is currently pursuing a Master of Science in Biochemistry to investigate the genetics of metabolic health and wellbeing in a cohort of Pacific teenagers in New Zealand.

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MECHANISMS UNDERLYING ILL-METABOLIC HEALTH AND MENTAL WELLBEING IN A PACIFIC ISLAND COHORT

Jarrold Toluono Moors

This study proposes to evaluate two aspects of health in a cohort of Pacific Island teenagers: that of metabolic health and wellbeing.

A cross-sectional study was carried out in 2006¹ on 80 Pacific Island teenagers between the ages of 15 and 18 years, residing in Dunedin. The study's aim was to investigate associations between body composition, glucose and lipid metabolism, and components of the metabolic syndrome (MS) in a community sample.

The current study is a partnership between the Pacific Trust Otago and the University of Otago, with the aim of repeating the cross-sectional study on a larger group of Pacific teenagers residing in Dunedin, and including an additional study on wellbeing. The primary purpose is two-fold: one, to evaluate the vicissitudes, if any, in metabolic health in the 2006-2014 period and, two, to investigate social and physical factors that contribute to their wellbeing.

Approximately 200 teenagers will be invited to take part in this study. Data collected will be:

1. Anthropomorphic and body composition measures
2. Biochemical (renal function, lipids, 'vitamin D, urate, glucose)
3. Genetic
4. Mental health related (evaluated by wellbeing questionnaire)
5. Lifestyle related (diet and activity).

The study's genetic component will have the sub-objective of evaluating the interaction between genes and the environment in physical and mental health. The data will permit the Pacific Trust Otago to assess and tailor interventions. Furthermore, it will breed new knowledge of the underlying mechanisms of poor metabolic health in a Pacific-based population of teenagers.

Keywords: metabolic health, mental wellbeing, genetics, metabolic syndrome

1 Grant, A., Taungapeau F, McAuley K., et al (2008). Body mass index status is effective in identifying metabolic syndrome components and insulin resistance in Pacific Island teenagers living in New Zealand. *Metabolism* 57, 511 – 516.



LIMU CHERYL MOU-VAGI

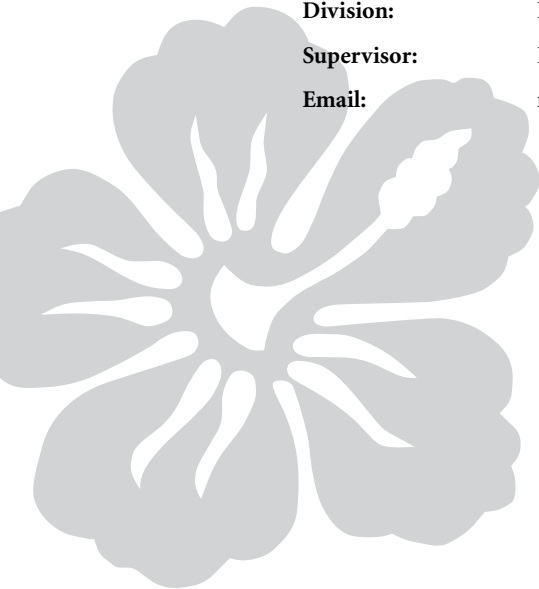
Limu is from Papua New Guinea. She completed her BCAPSci at the University of Otago in 1995. She then worked at the University of Goroka and other tertiary institutions in Papua New Guinea. Limu returned to the University of Otago on a NZAID scholarship in 2011. She completed her Master of Social and Community Work degree in 2013.

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STRUGGLES OF RURAL YOUTH: FACTORS THAT EMPOWER AND DISEMPOWER YOUTH IN THE RURAL VILLAGE, CENTRAL PROVINCE, PAPUA NEW GUINEA

Limu Cheryl Mou-Vagi

This research explores the multifaceted issues affecting youth from Central Province, Papua New Guinea, who come from dysfunctional families and live in rural villages. Central Province is located on the southern coast of Papua New Guinea. Young people make up 47% of the population. Additionally, a larger number of young people live in rural areas (85%) than in urban areas (14.8%). A dysfunctional family includes youth who come from single parent families, no income and low or one income families. The research is set within a framework that recognises the uneven institutional power relationships between the young and the older people of the village community.

This research explores the hardships encountered by youth in rural villages. These hardships are rooted within institutions and cultural changes through the process of modernisation. The research also investigates the degree to which collaborative relationships empower youth and enhance inclusive partnerships. Young people are agents of change in their community; therefore a multilevel approach is needed to work with different stakeholders at each level.

Interviews from the study highlight contrasting views about the interactions between the youth and elders in rural villages. The data identified that, although legislation stipulates and expresses an inclusive and communitarian approach (bottom up) by the village, service delivery is in reality at odds with the views and needs of the youth. Findings suggest that to ameliorate the relationships youth have with older generations, repositioning the power relationships of the rural youth requires the integration of cultural elements in development programmes to improve and influence their livelihood.

Keywords: youth, rural village, power relationships, discourse



KERON NILES

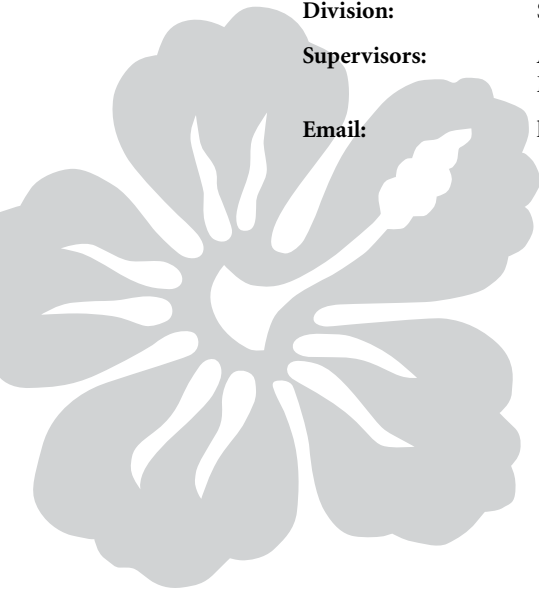
Dr Keron Niles is a Visiting Fellow in the Energy Studies Unit at the University of Otago. He previously worked as a Research Consultant at the Shridath Ramphal Centre for International Trade Law, Policy and Services, at the University of the West Indies. Keron received his PhD from Otago in August 2013. He is currently the Academic Coordinator at Aquinas College.

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DEPENDENCE IN SMALL ISLAND DEVELOPING STATES ON IMPORTED ENERGY AND AID

Keron Niles and **Bob Lloyd**

This research examines the impact of international aid (if any) on a sustainable energy transition in the power sector, particularly as it relates to the acquisition and deployment of renewable and energy conserving technologies.

Although this paper examines the power sector, requests for data on all projects related to the energy sector as a whole or any part thereof that occurred in the Caribbean and Pacific between 1970 and 2010 were sent to donor entities (including development banks) active in both regions. Approximately 550 separate energy initiatives which donor entities had approved were identified. To cross check the project data and to reduce possible donor bias a total of 76 interviews were conducted with key power sector stakeholders from 19 countries.

In the Pacific, the evidence shows that the largest portion of funding from donor entities was allocated to renewable energy project activities. In the Caribbean, the converse was true; the majority of funds awarded were allotted to fossil-fuelled projects.

This paper argues that donor entities have played a pivotal role in acquiring energy technologies as well as in formulating and developing energy policies in the Caribbean and Pacific. That said, while this paper recognises that some progress has been made toward a renewable energy transition, it argues that the pace of the uptake of alternative energy technologies has been too slow, particularly in the Caribbean.

Keywords: islands, dependence, energy, aid, developing



CLARA K PAU

Clara is of Samoan-Pakeha descent. She holds a BA(Hons – first class) and BSc from Otago. She is completing an MA in Indigenous Development (He Kura Matanui). Clara is a recipient of several scholarships, including University of Otago Leaders of Tomorrow, Division of Humanities Bridging, University of Otago scholarship in Science, as well as a University of Otago Pacific Island Master's scholarship.

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SNS (SOCIAL NETWORKING SAMOANS): IS SOCIAL NETWORKING REPRODUCING AND MAINTAINING SAMOAN KNOWLEDGE AND IDENTITY?

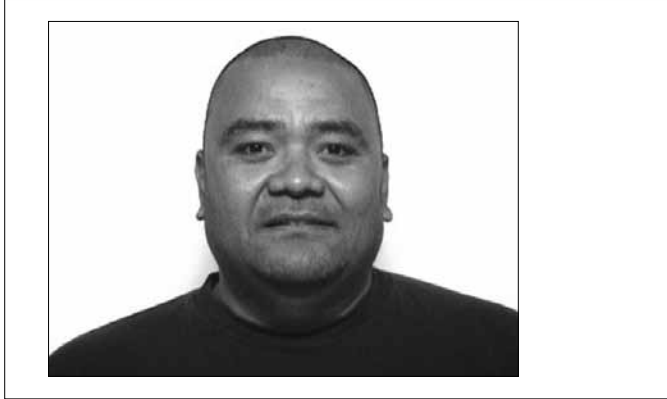
Clara K Pau

Only recently are narratives concerning the influences of the internet on the lives of diasporic and indigenous peoples emerging.¹ In the Samoan context, it has long been clear that infrastructural technologies enable more “regular physical, symbolic and/or fantasized return”² to Samoa via air travel, sea, telephone, and other social spaces such as literature and film. Unlike these, social networking sites represent one such technology that allows contact regardless of time and space. However, it still remains to be seen whether or not they give an idiosyncratic technological edge to pursuits to conserve, arouse and create connections, identity and knowledge in the Samoan diaspora.

My intention in this research is to examine whether social networking through information technologies helps to maintain and reproduce indigenous knowledge and identity in the Samoan diaspora, especially in the migrant enclave of New Zealand. Qualitative interviews, incorporating aspects of *talanoa*³, *kakala*⁴ and *fa’asamoa*, as well as virtual ethnography, will form the foundation of my research methodology. In order to observe mechanisms of ethnic boundary maintenance on the social networking sites of participants, I aim to participate in both active and passive ways on their online profiles, as well as conducting interviews. It is intended that the findings of this research be used by the wider public to formulate appropriate and viable means of networking between diasporic migrant enclaves and also with groups in Samoa.

Keywords: social networking, Samoa, diaspora, identity

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 - 3 Vaioleti, T. (2006). Talanoa Research Methodology: A Developing Position on Pacific Research. *Waikato Journal of Education*, 12: 21-34.
 - 4 Thaman, K. (2003). Culture, teaching and learning in Oceania. In K. Thaman (ed), *Educational Ideas from Oceania* (pp.3-12), Suva: IOE.



MATANI F SCHAAF

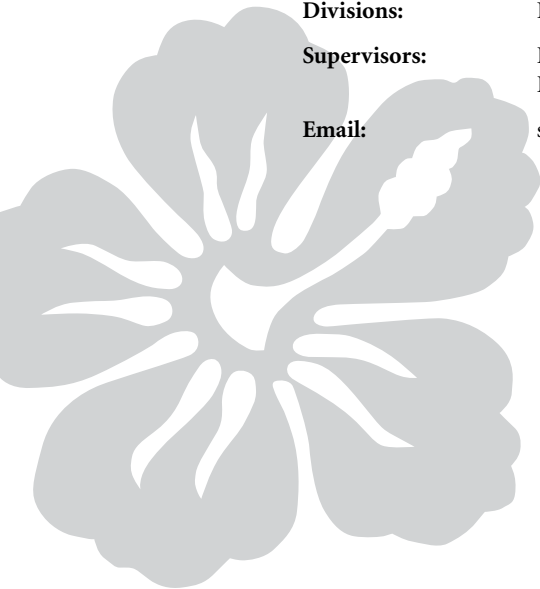
Matani, Tongan born and raised, is a PhD candidate in Pacific Studies. His interests in professional rugby and Pasifiki rugby players' motivation and burnout stem from a concern for the wellbeing of Pasifiki peoples and communities, and from his own personal passion for rugby. His love for rugby will never end as a coach, mentor, critic and conscience.

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PROFESSIONAL PASIFIKI RUGBY PLAYERS' EXPERIENCES OF MOTIVATION AND BURNOUT: THE IMPLICATIONS FOR RUGBY AND PASIFIKI COMMUNITIES

Matani Schaaf

Rugby players from Pasifiki backgrounds are fast becoming a very powerful group globally. This paper examines why Pasifiki players are playing rugby or, in more scientific parlance, the participation motivation of elite Pasifiki rugby players. While there is considerable research in sport psychology on motivation, and some on the motivation of elite athletes, there appears to be little or no research on participation motivation of elite Pasifiki sports people. Sports participation research has been dominated by Western theories and models. There is little or no research that has incorporated a theory or model that encompasses those values that are significant to Pasifiki peoples. The lack of research in this area suggests that there is little scientific knowledge, at least about this phenomenon, and that research is needed to identify what specific cultural factors exist that motivate so many Pasifiki peoples to play sport.

Drawing on the findings of my doctoral research so far and its implications for players and rugby, this paper outlines the mismatch between the lived realities of Pasifiki rugby players and the lived realities of non-Pasifiki rugby players playing semi-professional and professional rugby. In essence, I examine whether Pasifiki athletes' experiences of motivation and burnout are similar to that of non-Pasifiki athletes' experiences.

Keywords: Pasifiki rugby players, rugby, motivation and burnout, cultural factors



LORENA ILEANA SCIUSCO

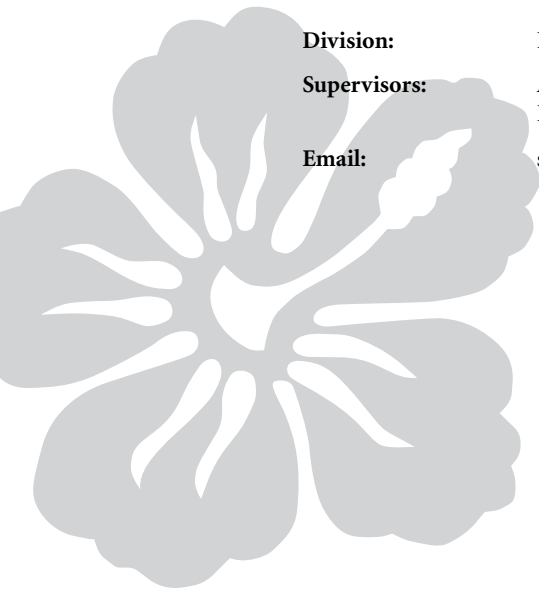
Lorena completed her BA(Hons) at La Trobe University (1994) and her BSc/GradDip in Cultural Heritage Management (CHM) at the University of Canberra (2001). Now a PhD candidate at the University of Otago, she is conducting a case study in Samoa and American Samoa, examining how government agencies respond to the archaeological past to understand better the connection between CHM and national identity.

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HERITAGE MANAGEMENT AND CONNECTIONS TO THE ARCHAEOLOGICAL PAST: A SAMOAN AND AMERICAN SAMOAN STUDY

Lorena I Sciusco

The management of cultural heritage is about protecting places of cultural significance. Cultural heritage management (CHM) is now firmly part of the discourse utilised by governments and policy makers in negotiating the cultural identity of nations, and archaeological knowledge and expertise occupies a privileged position within this discourse. This research examines the management of Samoan archaeological heritage across the Samoan archipelago by comparing Samoa's CHM practices with those of American Samoa. Both places share a common archaeological past, but the former is an independent country and the latter an American territory.

Samoa's political system combines the Westminster style of democracy with traditional customary law. In Samoa, the *Planning and Urban Management Act 2004* affords some protection for archaeological and heritage places. In American Samoa the *National Historic Preservation Act of 1966* (as amended) is central to archaeological and heritage preservation, but applies only to federal land or federal undertakings. Territorial legislation is provided by the *American Samoa Coastal Management Act 1990*, which holds a mandate over all land tenure classification.

The research has two key aims: to understand the relationship between the archaeological past and contemporary narratives of national identity, and to develop a framework for interpreting how Samoan and American Samoan government agencies respond to the archaeological past with a particular focus on planning and heritage protection legislation, policies and guidelines.

Keywords: archaeology, CHM, Samoa, American Samoa



SUPATTRA SROYPETCH

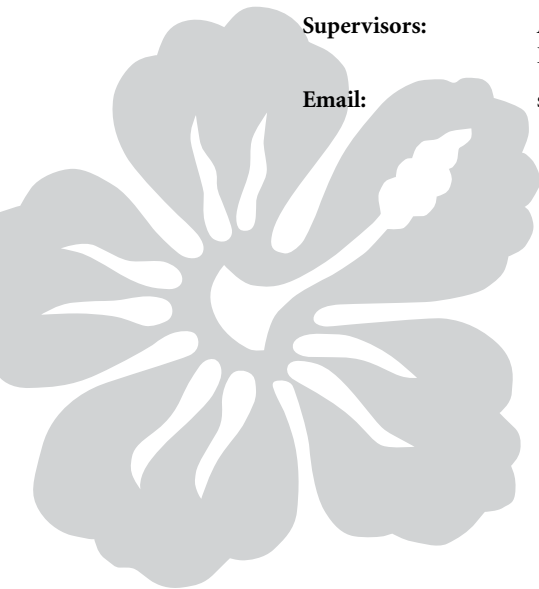
Supattra is currently doing a PhD in Tourism and is in the final year of her study. She holds a BA(Hons) in Business Administration (Hotel and Tourism) from Khon Kaen University in Bangkok, Thailand. She also holds a Master of Arts degree in Tourism from Assumption University in Bangkok.

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HOST AND GUEST PERCEPTIONS OF BACKPACKER TOURISM IMPACTS ON THE FIJIAN COMMUNITY

Supattra Sroyetch

Backpacker tourism is promoted to a considerable extent by the Fiji government as a tool for overcoming the inherent effects of conventional tourism and with the aim of distributing the greatest socio-economic benefits to its native citizens. However, research into the impacts of backpacker tourism on host communities in Fiji is still under-explored. This study examines the impacts of backpacker tourism as perceived by both hosts and backpackers and what factors determine the perceptions of both groups of the impacts on the Fijian host community.

The research was prompted by the fact that the literature on the impacts of backpacker tourism is primarily drawn from the views of the host communities and researchers whilst significantly overlooking the guests' view of their own impact. The analysis is based on data collected via a series of interviews with host and backpacker populations in the Nacula Islands, the Yasawa Group of Fiji, between August and November 2011. Data were analysed using statistical analysis and content analysis to provide a breadth and depth of results.

The findings reveal that the Fijian host and backpacker perceptions of the impacts of backpacker tourism on the host community differed significantly in all dimensions – economic, socio-cultural and environmental. This study also indicates some socio-demographic factors which influenced the perceptions of both hosts and backpackers. The findings are valuable, providing the opportunity for the host population in Fiji to gain a greater understanding of the backpackers by presenting how the latter conceptualise their own impacts on the local communities – an important consideration for the continued sustainability of the tourism industry.

Keywords: host, guest, perceptions, backpacker tourism, impacts, Fiji



FETAOMI BRENDA TAPU-QILIHO

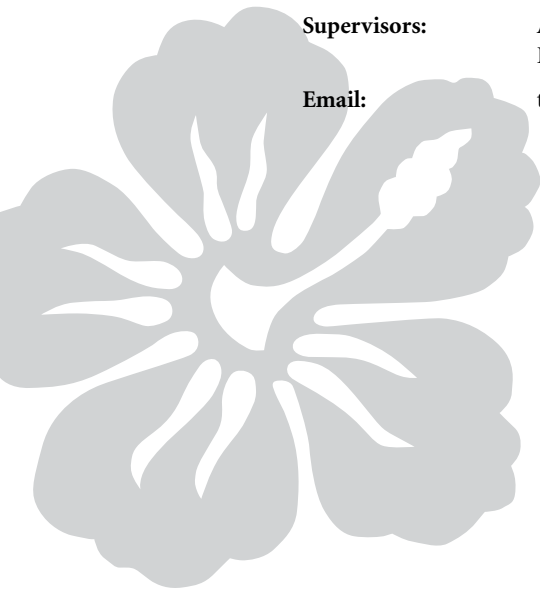
Taomi is Samoan and currently lives in Lautoka, Fiji. She has a BA in Sociology and Anthropology and an MA(Hons) in Pacific Studies from the University of Auckland. She is a first-year PhD candidate on a three-year scholarship awarded by the Anglican Church in Aotearoa New Zealand and Polynesia.

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TUVALUAN DIASPORA IN OCEANIA: IDENTITY AND BELONGINGNESS IN THE MARGINS

Fetaomi Tapu-Qiliho

Fiji and Samoa are home to myriad ethnic groups. This research concentrates on Polynesian ethnic enclaves within Samoa and Fiji: those of Tuvaluan descent. They exist in both rural and urban extremes of Fiji and Samoa. This project on the diaspora 'within' allows for the investigation into how Tuvaluans of Kioa Island and the Elise Fou community practise, live and experience life. It is from these communities that this research project will endeavour to gain ontological, epistemological and empirical insights. Both communities are ethnically Tuvaluan. Their integration into their host communities however has had significant repercussions for their current predicament as peripheral minority groups.

It is not the intention of this study to homogenise the Polynesian diaspora. There is an apparent gap, however, in Pacific Island diaspora literature. While the Diaspora has been written about extensively and Pacific Islanders have become the subjects of many such writings, little is known of Pacific diaspora within the Pacific itself. Non-traditional, intra-Pacific migrations of our contemporary times are fertile areas for research. Multi-disciplined research has concentrated mainly on Pacific Islander experiences in the Pacific Rim countries to which we 'traditionally' migrate.

This study looks at the phenomena of ethnicity and identity within diaspora. The main theoretical frameworks for this research will be derived from Critical and Indigenist theories and the conceptual outlines will be informed by constructivist or interpretivist paradigms. This project requires cultural, academic, ethnic, ethnographic, historical, gendered, and intergenerational and context specific information.

Keywords: Pacific diaspora, identity, ethnicity, minority groups



SULIANA E TEASDALE

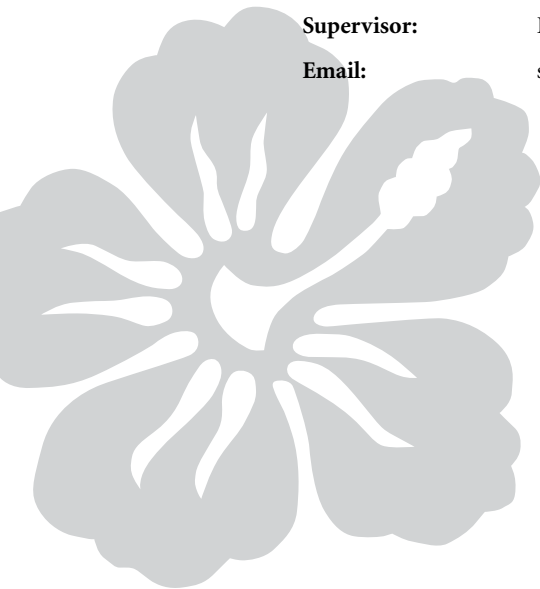
Suliana is half Tongan, half New Zealander. She has a BSc and PGDipSci, achieved with distinction, and will graduate from Otago this year with a Master of Science (in Botany) also with distinction. Suliana held a University of Otago Pacific Island Master's Scholarship to support her studies. She now works at AgResearch in its plant–fungal interactions team.

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DIVERSITY DETECTION OF ECTOMYCORRHIZAL FUNGI IN TERRESTRIAL AND CANOPY ENVIRONMENTS OF SILVER BEECH, NEW ZEALAND

Teasdale S, Wang X and Orlovich D

Ectomycorrhizal fungi form associations with the roots of plants. This symbiosis is mutually beneficial for both partners; the fungi help plants uptake limiting nutrients and water, while the plants supply the fungi with carbon food sources. Ectomycorrhiza (lit. root–fungus) have been recorded on the terrestrial (typical) and canopy (novel) roots of NZ silver beech. The novel canopy association forms where adventitious roots from the host tree grow into humus rich soil accumulations on the trees branches. While the canopy root phenomenon is globally recorded in temperate forests, it is largely unstudied.

Molecular diversity of silver beech terrestrial and canopy ectomycorrhiza communities was compared. Small nylon–mesh bags were buried around the terrestrial and canopy roots of five beech trees and left for 12 months. DNA was extracted from these bags and amplified using fungal specific primers. Diversity was measured using terminal restriction fragment length polymorphism (TRFLP) analysis.

Analysis of TRFLP profiles show that the terminal restriction fragment (TRF) richness, evenness and total diversity were not significantly different between the two environments. While total diversity was similar and a diversity index showed the two environments shared TRFs, two different ordination analyses show community profiles form environmentally specific groups. The two environments share 30% of TRFs; 41% are unique to the terrestrial environment and 29% unique to the canopy.

This is the first report showing potentially unique species associated only with canopy roots and the first description of similarities between diversity characteristics of ectomycorrhizal fungal communities in canopy and terrestrial systems.

Keywords: southern beech, ectomycorrhiza, canopy roots, molecular diversity



KOTEE BAURO TEBUREA

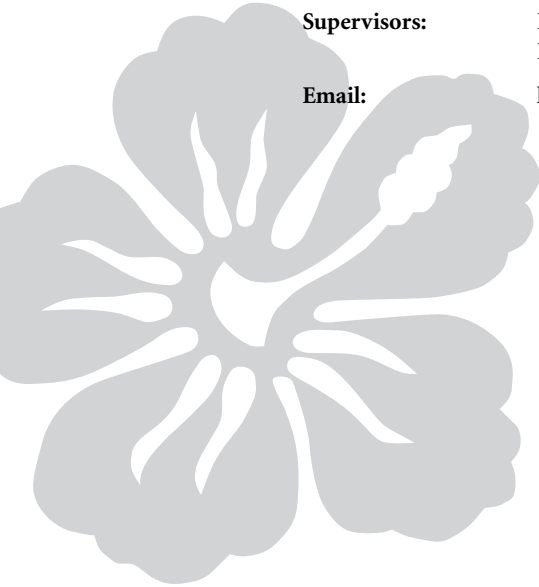
Kotee is from Kiribati. In Semester One 2013 she completed a Bachelor of Applied Science in Geographic Information Systems at the University of Otago. By Semester Two she will have completed a Postgraduate Diploma in Applied Science in Geographic Information Systems (PGDipAppSc GIS) also at the University of Otago. Kotee is supported in her study by NZAID.

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OUR WASTE OUR WAY: A SPATIAL STUDY OF HOUSEHOLD WASTE MANAGEMENT IN BETIO, TARAWA, KIRIBATI

Kotee Bauro Teburea, Antoni Moore and Greg Leonard

There is an increasing concern over solid waste disposal on the islands of Kiribati in the Central Pacific, especially on South Tarawa the main urban centre.¹ An effect of the increased urbanisation is that the people residing on South Tarawa have changed from traditional subsistence living to a more “westernised” lifestyle. As a result, the demand for imported goods together with their high level of packaging has greatly increased the volume of solid waste produced in South Tarawa. The inability to manage this waste effectively has been identified as a major outcome of this increased waste generation rate.

The aim of the study is to use geospatial analysis techniques to predict whether changes to the way in which the Betio Town Council manages solid waste collection in Betio (part of South Tarawa) will lead to improved solid waste handling. Data on current household waste management were collected by means of interviews and questionnaires in April 2013. Also recorded were the location of household waste collection sites and attitudes of the residents towards the management of their household waste. From this data a waste disposal network for Betio was created. Following this, location-allocation modeling and network routing were used to determine alternative efficient collection routes and optimal collection points.² Improving the management of household waste has the potential to extend the life and usability of landfills on South Tarawa.³

Keywords: solid waste management, Kiribati, network analysis, location-allocation modeling

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ALCINDA TRAWEN

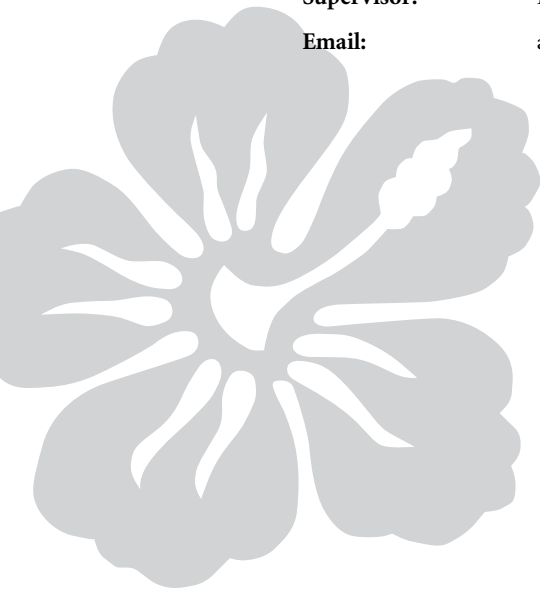
Alcinda is from Papua New Guinea and holds a Bachelor of Tourism from the University of Otago and a Master of Tourism from James Cook University. She has been working for the tourism authority in Papua New Guinea since 2007. Alcinda's research led to the successful completion of her Master of Planning degree in 2013.

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OVERCOMING COMMUNITY PARTICIPATION LIMITATIONS IN PAPUA NEW GUINEA TOURISM PLANNING

Alcinda Trawen

Papua New Guinea (PNG) undertook a Product Plan approach, which was a community-focused approach to tourism development to enable communities to become central targets for participation in the tourism development planning process. This research sheds light on factors affecting community participation that have thus far not been examined with reference to PNG Product Plans.

This research addressed the issue of community participation in tourism with special attention to overcoming the limitations involved in the participation process. It focused on the communities of the Buluminski Cycling and Tigak Sea Kayaking Product Plans in New Ireland Province. Specifically, this research looked at the perspectives of relevant stakeholders views of obstacles in the community participation process. It revealed the local systems that were used to overcome obstacles in the participation process. Field-based research was undertaken with 24 semi-structured interviews and community observations conducted.

The results showed that limitations are of a structural, operational and socio-cultural nature and that a mixture of traditional and community-orientated approaches may be used to overcome community participation limitations. A major conclusion is that community systems focused on local knowledge and semi-formal business agreements are appropriate participation frameworks to overcome operations limitations in tourism planning. This research provides insight for the creation of effective community participatory approaches in PNG tourism planning.

Keywords: community-based tourism, tourism planning, community participation

FA'AFETAI TELE LAVA

The Pacific Postgraduate Reference Group was established in late 2002 to support our postgraduate students via monthly seminars and meetings – a place where they could bring their frustrations and ideas, seek support from one another, and offer support too. This concept led to the idea of an annual symposium and the birth of “Pacific Voices.”

Pacific Voices is 10 years old today!

Sitting here in the 11th hour (or shall I say 10th) struggling to find the right words to say, I find myself looking for inspiration. For how could I appropriately acknowledge this auspicious event? As Christians, Pacific Islanders know that the number 10 represents the 10 Commandments and all that they represent – divine completeness. I looked back and I saw a decade of completeness – of a journey well travelled – and it brought great joy to the heart and soul.

In the first Symposium in 2004, I wrote:

*I am sure that the beautiful aria and tenor of “Pacific Voices”
will resonate for many moons to come, a poem in their own right:
a gift to be cherished.*

Today in this 10th anniversary of *Pacific Voices*, I hear nothing but the beautiful aria and tenor of Pacific Voices! It *has* become a “poem in its own right” through the hard work of many people, and especially our stars, our postgraduate students.

- ~ I pay tribute to all Pacific students who participated in this journey. Wherever you are in the world I am sure *Pacific Voices* occupies a special place in your own personal journey as your own participation and contribution gave voice to this treasure.
- ~ I pay tribute to our University leaders over the years and current, whose presence and contribution gave *Pacific Voices* mana and encouragement – the Vice Chancellors, Deputy Vice-Chancellors and Pro-Vice-Chancellors – your contribution and active participation have surely given *Pacific Voices* the highest of recognition to our students’ research projects.
- ~ I pay tribute to Mr David Richardson, Dr Charles Tustin, Professor Rachel Spronken-Smith and various other staff members for their advice and support
- ~ I pay tribute to the editorial team in the past and current, Drs Claire Matthewson, Mele Taumoepeau, Greg Burnett, Patrick Vakaoti and Nanai Iati Iati for supporting the Pacific Postgraduate Reference Group and doing the hard work every year of producing this book of abstracts and the Symposium programme.

Sing, Sing louder
Malo Tausala
Vakavinavinaka
Fa’afetai tele Lava!

Tofilau Nina Kirifi-Alai
Manager
Pacific Islands Centre