



University of Otago
Pacific Islands Centre

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PACIFIC POSTGRADUATE SYMPOSIUM

14 OCTOBER 2016

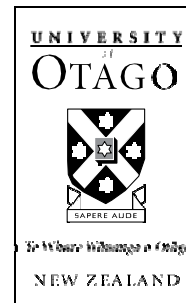
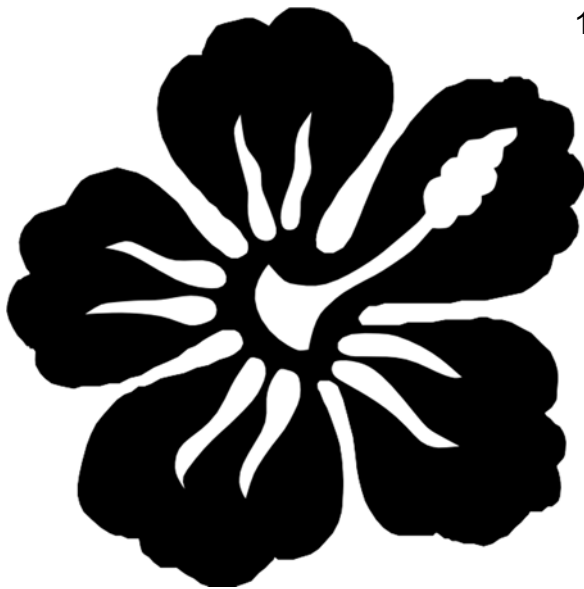
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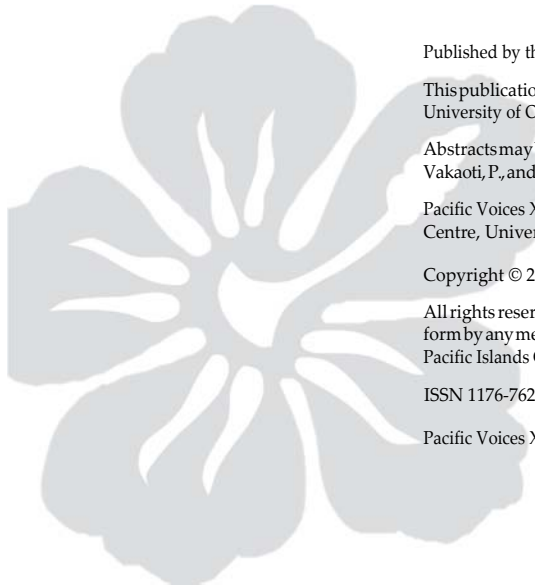


Pacific Voices XIII

PACIFIC POSTGRADUATE SYMPOSIUM

14 OCTOBER 2016





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Pacific Voices XIII: Abstracts for the Pacific Postgraduate Symposium

Foreword

A warm Pacific welcome to the *Pacific Voices XIII Postgraduate Symposium 2016*! 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 XIII Postgraduate Symposium*. Their research is inspiring, impressive and importantly, it will make a difference!

The participants of *Pacific Voices XIII Postgraduate Symposium, 2016* 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 XIII* will be impressed with the quality and variety of research that is reported in this volume. In 2016 the presentations span a range of disciplines across the University including biochemistry, pharmacy, dentistry, tourism, theology and religion, peace and conflict studies, and geography. The topics range from 'Science in crime fiction', to 'Gout in Polynesian groups', and 'The role of the church in responding to marital violence'. These are just a few of the presentations that are included in this Symposium.

Geographically, the research being reported includes issues in Papua New Guinea, the Cook Islands and Samoa, as well as issues related to Pacific Islanders in Aotearoa/New Zealand.

Finally, on behalf of the University, I would like to thank all those responsible for *Pacific Voices XIII*, and in particular Tofilau Nina Kirifi-Alai, Nanai Dr Iati Iati, Dr Mele Taumoepeau, Dr Patrick Vakaoti, Dr Rosalina Richards and Mrs Alison Finigan.



Professor Rachel Spronken-Smith
Dean, Graduate Research School

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ARPANA ARTHI DEVI

.....
Arpana is from Fiji. She is in the final year of a Doctor of Clinical Dentistry supported by the University of Otago Pacific Island Doctoral Scholarship. Arpana graduated with a Bachelor of Dental Surgery from Fiji and a PGDip in Clinical Dentistry (Endodontics) from Australia supported by a Rotary Ambassadorial Scholarship. She has five publications to date.

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ENHANCING THE EFFICACY OF ANTIMICROBIAL PEPTIDE BM2
AGAINST MONO-SPECIES BIOFILMS WITH DETERGENTS

.....
Arpana A Devi, Robert Love, Brian Monk
.....

The aim of this study was to investigate if a detergent regime will enhance the antimicrobial ability of BM2. Strains of *Enterococcus faecalis*, *Streptococcus gordonii*, *Streptococcus mutans*, and *Candida albicans* were grown from glycerol stocks after confirmation of the strains. Dilution series of the artificial peptides BM2 and detergents were prepared in aqueous solution and minimum inhibitory concentration (MIC) and minimum bactericidal concentration (MBC) were determined using a broth micro-dilution method. Further on Planktonic cells and monospecies biofilms were exposed to the detergent and BM2 combinations. The efficacy of BM2 and detergents at causing biofilm detachment was measured using a crystal violet based assay.

The study found that Planktonic cells were easier to kill with the detergents in isolation or in combination with BM2. SDS and CTAB in combination with BM2 increased the efficacy of BM2 against the test organisms. Tween 20 did not kill any of the test organisms alone or in combination. Biofilms were harder to eradicate and detergent, BM2 combinations gave varied results for the different species tested. Detergents in combination with BM2 did not increase the efficacy of the antimicrobial peptide in disrupting *S. mutans* biofilm. In conclusion, within the limits of this *in-vitro* study a combination of BM2 and SDS showed antimicrobial action against certain endodontic microorganisms occurring as planktonic cells and in biofilms and offers the potential to develop an effective between visits medicament.

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Keywords: Medicaments, BM2, Detergents, biofilms



TAHZEEB FATIMA

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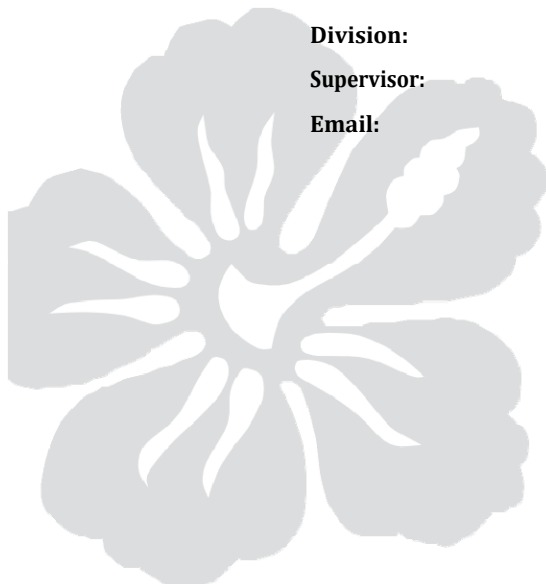
Tahzeeb is an international student pursuing her doctoral studies in Biochemistry supported by a University of Otago Doctoral Scholarship. She completed her M.Phil. in Medical Physiology & Biochemistry in Pakistan. Tahzeeb's research focuses on integrating scientific and medical understandings of the relationship of gout with metabolic disease.

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FERRITIN LEVELS ARE ASSOCIATED WITH SERUM URATE AND GOUT – A ROLE OF IRON METABOLISM IN GOUT?

.....
Tahzeeb Fatima, Cushla McKinney, Lisa K Stamp, Nicola Dalbeth, Cory Iverson, Tony R Merriman, Jeffery N Miner
.....

Iron homeostasis is a tightly regulated set of biochemical processes. Transferrin regulates iron uptake and ferritin stores excess iron from cellular pools. Ferritin has been positively associated with urate levels¹ and a study suggested a role for iron as a trigger for gout flares.² In addition, a genetic variation in the transferrin receptor has been associated with gout.³ Our aim was to replicate the association of ferritin with urate and to test for its association with gout.

Association between gout and ferritin was assessed in a sample of males from New Zealand (NZ) (of NZ European and Polynesian ethnicity) and the United States (US) (393 cases, 80 controls). Association between ferritin and urate was assessed in 180 non-gout individuals from NZ and the US and 10,727 non-gout participants from the Jackson Heart Study (JHS; of African American ethnicity) and 3rd National Health and Nutrition Examination Survey (NHANESIII; of European and African American ethnicity). Multiply-adjusted regression analyses for age, sex, body mass index and C-reactive protein were done using R-v3.3.0.

Ferritin was positively associated with gout in NZ Polynesian and US participants but not in NZ Europeans. A positive association of ferritin with urate was observed in NZ Polynesians, and the JHS and NHANESIII participants but not in NZ European and US individuals. A positive correlation between ferritin and gout flares was found in NZ European and US individuals. Our data replicate the association of ferritin with urate. Increased ferritin levels were also associated with gout and self-reported frequency of flares. It is important that future research concentrates on testing a possible causal role of iron in the pathology of gout.

.....
Keywords: Iron, ferritin, urate, gout

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- 1 Ghio, A.J., et al. (2005). The association between serum ferritin and uric acid in humans. *Free radical research*, 39(3): 337-342.
 - 2 Facchini, F.S. (2003). Near-iron deficiency-induced remission of gouty arthritis. *Rheumatology*, 42(12): 1550-1555.
 - 3 Merriman, T.R., et al. (2015). A Genome-Wide Association Study Reveals Association of the Transferrin Receptor Locus with Gout. *Arthritis and Rheumatology*, 67(suppl10).



HILLA FUKOFUKA

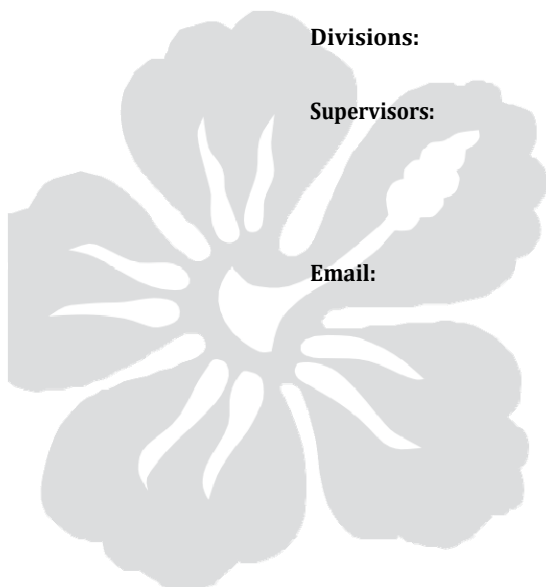
Hilla is of Tongan and Niuean descent, and is currently enrolled in the BMedSc (Hons) programme between the 3rd and 4th years of her MB ChB degree. To aid the completion of this project, Hilla received an Otago Medical School Scholarship. Next year, she intends to commence the clinical component of her medical training.

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Divisions: Sciences
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.....
Hilla Fukofuka
.....

The field of positive psychology suggests that positive psychological wellbeing and ill-being are not merely the opposite ends of the same spectrum. There is increasing evidence that these are two distinct constructs, for example, with wellbeing having a positive, independent association with cardiovascular health.¹

Preliminary findings from an ongoing study partnership between the Pacific Trust Otago and the University of Otago have reported an association between measures of wellbeing, mental health and markers of metabolic ill-health in a cohort of Pacific Youth in Dunedin.² Building on these findings, this study aimed to explore health and wellbeing from a Pacific Youth perspective and identify specific barriers to achieving this.

The study methods were underpinned by the University of Otago's Pacific Research Protocols and drew inspiration from Kakala and Talanoa approaches. These were adapted to suit the needs of this study which employed the Photovoice method of data collection and a Grounded Theory analytical approach.

Preliminary findings explore how existing frameworks, such as the Fonofale model of Pacific health, might be extended or revisited to reflect perspective of Pacific Youth in New Zealand. In particular, to recognise bi-cultural identity formation, the importance of family history, the influence of school and university environments and the developments in technology. We hope these findings can form a basis for ongoing partnerships with the Pacific Trust Otago and the development of intervention programs to support health and wellbeing among Pacific Youth.

.....
Keywords: Pacific youth, wellbeing, photovoice

1 Boehm, J. K., & Kubzansky, L. D. (2012). The heart's content: the association between positive psychological well-being and cardiovascular health. *Psychological bulletin*, 138(4), 655.
2 Moors, J. (2011). The metabolic health of Pacific Island teenagers living in Dunedin. Biochemistry, University of Otago.



KIM ANDREAS KESSLER

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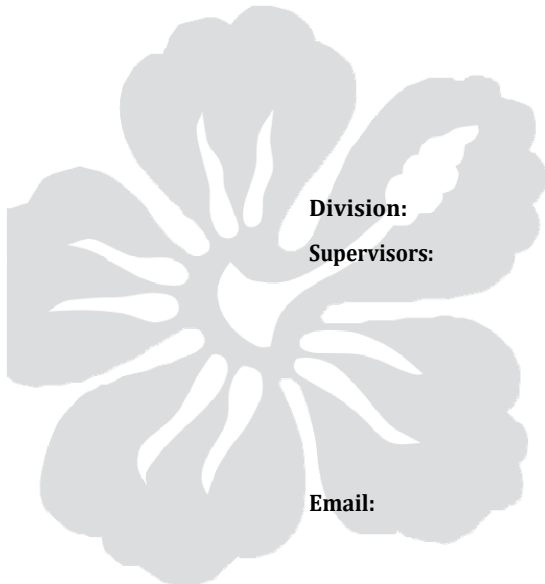
Kim Andreas Kessler holds a BA in Social Anthropology from the University of Bern, Switzerland. He is a Master's candidate in Geography at the University of the South Pacific (USP) and a recipient of the USP Research Office Graduate Assistant Scholarship. Kim has previously worked as a Teaching Assistant for the School of Geography, Earth Science and Environment at USP in Fiji and has recently completed his fieldwork in the Cook Islands.

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RURAL DEVELOPMENT IN PACIFIC OUTER ISLANDS:
PERSPECTIVES FROM MA'UKE, COOK ISLANDS

.....
Kim Andreas Kessler
.....

Pacific Island countries are often classified as Small Island Developing States (SIDS) which due to their relatively limited size and remoteness experience unique development challenges and need 'assistance'. This comparative perspective on Pacific Islands gives little attention to local development priorities and internal development challenges. Based on recently completed fieldwork conducted on Ma'uke, Cook Islands, this study critically addresses development theorisation and development practice from a grassroots perspective. Semi-structured interviews have been used as the main research method. By interviewing local people living on Ma'uke, development priorities from a grassroots perspective are examined. Subsequently, context-specific challenges to the development of Ma'uke are highlighted. Finally, possible solutions to overcome these challenges are suggested and potential lessons for the development of the wider Pacific Island region are discussed. This work-in-progress presentation draws on a literature review, addresses the research process and presents tentative research findings.

.....
Keywords: SIDS, participatory development, aid effectiveness, sustainable development



LATUIVAI LATU

.....
Latuivai Latu is a probation minister of the Methodist Church of Samoa with a Bachelor of Divinity from Piula Theological College, Samoa. He is a Methodist Church of England scholarship recipient and currently working towards a Master of Theology in Practical Theology.

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FETAUSIA'I: A SERVANT-LEADERSHIP PARADIGM FOR THE REVERSED ROLE OF THE CHURCH AS A SERVANT

.....
Latuivai Latu
.....

The primary role of the Church is 'to serve' the world, but not to be served by the world.² This is reflected in John Wesley's (the founder of the Methodist movement), declaration that 'all the world is my parish.'³ Such an affirmation underpins the Christian value of *fetausia'i* central to the role of the church in Samoan society. In this context, church ministers are highly respected as God's representatives, to the extent that the Samoan public has internalised the cultural understanding '*elē fa'a'ele'eleale faife'au*' literally meaning 'church ministers are not allowed to do dirty works'. However this cultural view of the Samoan church minister is a 'reversal' of the Christological view of Jesus as both 'Lord' and 'Servant'.

This paper draws on the narrative of 'footwashing' in *John 13* where Lord-Jesus literally washes the dirt from his disciples' feet and argues that this act personifies the image of a true and caring leader, the ultimate example for the Church. The paper challenges the Church to re-examine her image as a servant, in light of a culture that has 'reversed' the very nature of the Church as embodied in Jesus' own life and ministry.

.....
Keywords: *fetausia'i*, church, servant, leadership, Jesus Christ

1 Translated to mean – 'reciprocal caring'

2 Dulles, A. (1988). *Models of the Church*, Dublin, Ireland: Gill and Macmillan, 92.

3 John Wesley, personal journal, 11 June, 1739, <http://www.ccel.org/ccel/wesley/journal.vi.iii.v.html>, accessed 19 September, 2016.



MICHAEL FUSI LIGALIGA

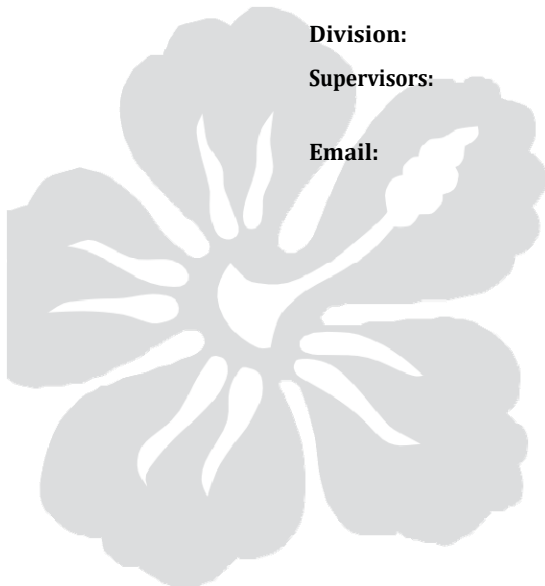
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Michael has a BA in Political Science and International Peacebuilding from Brigham Young University Hawaii (BYUH). After receiving his PGDip and MA from the National Centre for Peace and Conflict Studies (NCPACS) at Otago, he spent two years teaching peace and conflict theory at BYUH. Michael returned in 2015 to the NCPACS where he is pursuing his PhD. Michael is of Samoan descent.

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FAA SAMOA: PEACEBUILDER OR PEACEBREAKER?
UNDERSTANDING SAMOA’S DOMESTIC VIOLENCE ISSUES
THROUGH GALTUNG’S TYPOLOGY OF VIOLENCE

.....
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 none the less been credited with Samoa’s ability to sustain peace and stability. Despite this, domestic violence is now an epidemic in Samoa. Numerous researches have adopted the concept of *Faa Samoa* to examine Samoa’s protective and preventative mechanisms (*Va, Va Tapuia, Faaaloalo, Alofa, Malupui*) against domestic violence. However, little is known about whether or not there are other aspects within *Faa Samoa* (*Faalavelave, Faa Matai, Aiga*) that contribute or influence domestic violence 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. The aim of the research is to examine whether or not there are examples of structural and cultural violence in *Faa Samoa* and if they (structure and cultural violence) reinforce direct violence (domestic violence) as suggested by *Galtung’s Typology of Violence*.

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Keywords: Faa Samoa, direct violence, structural violence, cultural violence, domestic violence



SELOTA MALIKO
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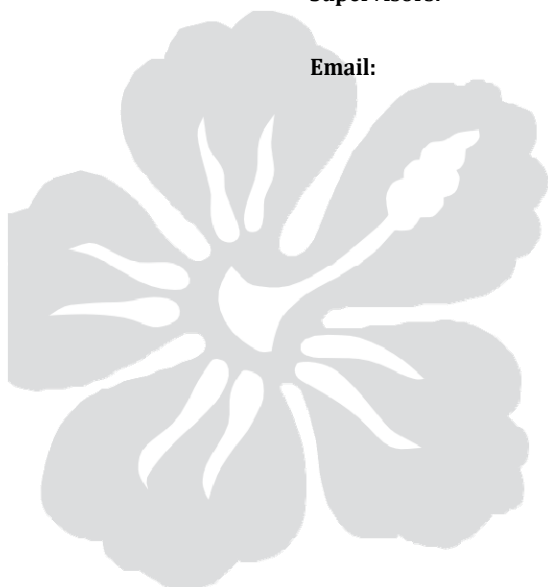
Selota is an ordained minister of the Methodist Church of Samoa and a former lecturer at Piula Theological College, Samoa. He is currently a final year PhD student in Pastoral Theology at the University of Otago.

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A SAMOAN RESTORATIVE JUSTICE APPROACH TO BANISHMENT
(FA'ATEA MA LE NU'U)

.....
Selota Maliko
.....

This study proposes a Samoan restorative justice approach as a response to the issue of banishment in Samoa. It includes an overview of restorative justice in reference to its core concepts; mediation, empowerment, responsibility, reparation and healing. The discussion is framed within Samoa's unique religious and cultural realities and Jesus' teachings and practice of justice.

In proposing a Samoan restorative justice approach, this study also offers an overview of Samoan society and the socio-political setting of the *ifoga* (formal apology) in which restorative justice is to be implemented. The proposed Samoan restorative justice approach is contextual and embraced within the Samoan concept of *va fealoaloa'i* (relational respect). This recognises the need for offending to be dealt with in the village context, while also responding to the biblical imperative to seek reconciliation, forgiveness, healing and restoration of 'right' relationships between individuals or brothers and sisters in Christ.

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Keywords: banishment, restorative justice, *va fealoaloa'i* (relational respect)



MAXON MANI
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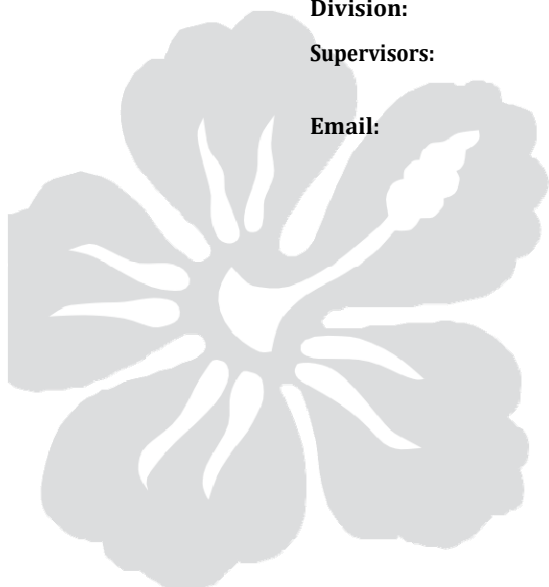
Maxon Mani is from Papua New Guinea. From 2011 to May 2015 he taught biblical and contextual theology at Christian Leaders' Training College in PNG. He is currently doing his PhD in Theology and Public Issues at the University of Otago. His interest is in the development of contextual theology in Melanesia.

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THE ROLE OF THE CHURCH IN RESPONDING TO MARITAL
VIOLENCE IN PAPUA NEW GUINEA

.....
Maxon Mani
.....

Marital violence is endemic in Papua New Guinea (PNG) and is overwhelmingly male violence against women. It has an enormous impact on the religious, economic and political life of the people. This paper examines the social reality of marital violence in PNG, and the complex web of forces that contribute to the problem. It analyses the problem by drawing on the written documentations of victims and their families influencing how these experiences should be understood and responded to. The paper in particular questions the role of the church in relation to the problem and suggests ways in which it could become a transformative agent in the fight against marital violence.

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Keywords: marital violence, family, community, church, Papua New Guinea



JARROD MOORS

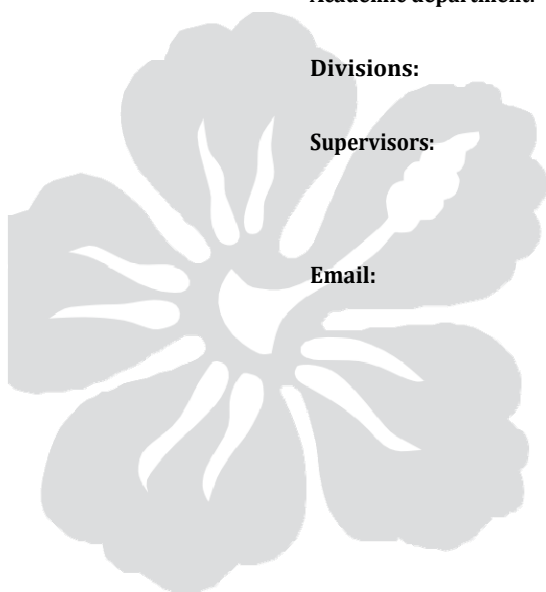
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Jarrod is of Samoan descent and is a recipient of the Health Research Council's prestigious PhD scholarship. Jarrod recently completed a Master of Science in Biochemistry (with Distinction), and also holds a Bachelor and Postgraduate Diploma of Science in Anatomy. Jarrod is currently pursuing a PhD in Biochemistry that integrates scientific and medical biology knowledge to understand the genetic and environmental factors causal of metabolic disease in Polynesians.

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INVESTIGATING THE GENETIC AND ENVIRONMENTAL CAUSES OF METABOLIC DISEASES

Jarrold Moors

Pacific people in New Zealand (NZ) often experience relatively poor health outcomes, having more than double the rate of obesity, diabetes, cardiovascular disease and the metabolic syndrome compared to those of NZ European ethnicity.¹ Genetic, biochemical and environmental factors play a crucial role in the development of these diseases. These factors that predispose people of the Pacific, particularly Pacific adolescents are poorly understood. Thus this study aims to investigate the factors at play and the extent to which they explain metabolic disease in a teenaged cohort.

The Pacific Trust Otago, in collaboration with the University of Otago, have recruited approximately 200 Pacific teenagers (Males=104, Females=99) from the Dunedin region. Participants provided blood and urine samples to determine biochemical traits (e.g. serum urate, cholesterol, triglycerides etc.). Demographic and other lifestyle information were collated by means of questionnaires. All statistical analyses were conducted using STATA.

The mean body mass index (BMI) for both males and females were high (28.51 kg/m² and 29.52 kg/m² respectively), in a classification category of 'borderline obesity'. Positive associations were observed between BMI and measures of blood pressure, high-density lipoprotein and serum urate. Alcohol consumption was associated with significantly higher BMI, with higher physical activity associated with lower BMI.

These findings add new evidence to established findings among older populations. The range of measures associated with higher BMI are indicative of metabolic processes that further progress into adult metabolic conditions such as heart disease, kidney disease, high blood pressure and other complications. This study will continue to investigate these factors, and the influences they have on diabetes to further illuminate the underlying causes of ill-metabolic health in Pacific teenagers.

Keywords: metabolic, BMI, health, Pacific, teenagers

¹ Ministry of Health 2014. Annual Update of Key Results 2013/14: New Zealand Health Survey. Wellington, New Zealand: Ministry of Health.



SUJITA NARAYAN

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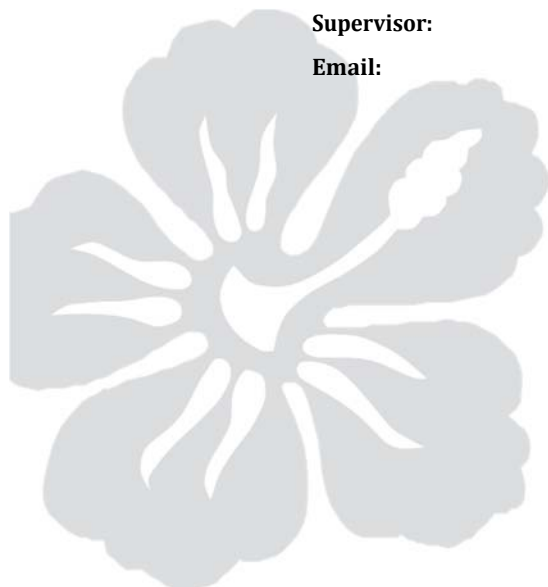
Sujita is from Fiji and is a pharmacist by background. She graduated with her Bachelor of Pharmacy from Fiji School of Medicine and Masters in Pharmacy Practice from Monash University in Melbourne, Australia. Sujita is in the final year of her PhD and is supported by the School of Pharmacy.

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Division: Health Sciences

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A MEDICINES COMORBIDITY INDEX FOR OLDER PEOPLE

.....
Sujita W Narayan, Prasad S Nishtala
.....

Multimorbidity is common in older individuals and is a significant predictor of adverse health outcomes. A comorbidity index for estimating multimorbidity based on prescription data is an important tool for predicting health outcomes in pharmacoepidemiological studies. The aim of this study was to develop a Medicines Comorbidity Index (MCI) based on nationwide prescription data for older individuals aged ≥ 65 years and to evaluate its performance in predicting hospitalisations and mortality. Administrative datasets were used to collate a list of medicines for twenty-four most common comorbidities causing disability and death in older New Zealanders. Predictive performance of the MCI was evaluated against the Charlson Comorbidity Index (CCI) using measures of discrimination (Receiver Operating Characteristic curves), sensitivity and specificity (c-statistic) and calibration (Brier Scores) for regression models. The study found that the MCI is a significant predictor of hospitalisations and mortality. For mortality, the CCI had a higher c-statistic in comparison to the MCI (0.72; 95% CI 0.71–0.72 vs 0.70; 95% CI 0.69 – 0.70 at $p < 0.05$) with Brier scores of 0.07 at $p < 0.05$. For hospitalisation, both indices were modest but significant predictors; MCI with $r = 0.14$ and CCI with $r = 0.62$ ($p < 0.05$). In conclusion, the MCI offers a valid and convenient tool for measuring multimorbidity and predicting health outcomes for older individuals and can be an important tool to adjust for comorbidity risk in pharmacoepidemiological studies.

.....
Keywords: comorbidity index, older people, pharmaceutical claims, index validation, prescription



ANITA LATAI NIUSULU

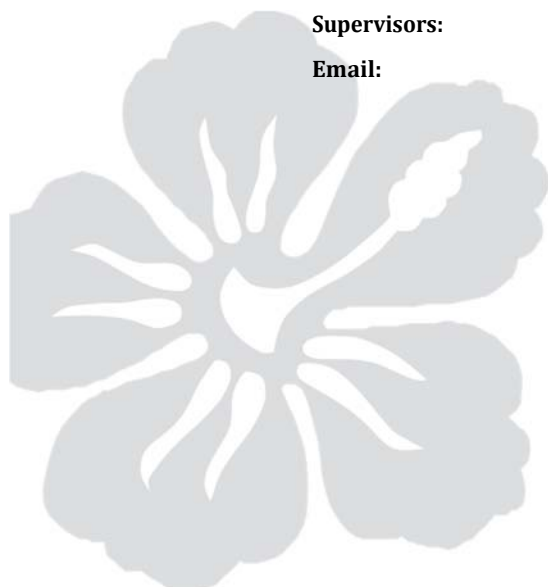
.....
Anita is studying towards a PhD on a University of Otago Doctoral Scholarship. Born and raised in Samoa, she is from the villages of Saleimoa and Moataa and has been teaching at the National University of Samoa since 2002. Anita is supported by a University of Otago/National University of Samoa scholarship.

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Division: Humanities

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COMMUNITY RESILIENCE TO CLIMATE CHANGE IN SAMOA

.....
Anita Latai Niusulu, Tony Binns, Etienne Nel
.....

This study considers the resilience of island societies to climate change by assessing islanders' perceptions of current and future climate-related changes and extreme events. Based on findings from field research conducted in Samoa, the study argues islanders are highly aware of climate change and they have already been experiencing its effects, especially in recent decades. Additionally, islanders had been developing various coping strategies to manage, avoid and reduce the impact of risks, as well as take advantage of opportunities associated with climate-related changes. Multiple and multi-layered connections which are inherent within island societies have been, and will continue to be, crucial to the development of such strategies. The study recommends that islanders' perceptions and responses are best understood when these are situated and interrogated within the structural context of family, village, church, district and nation, as well as socio-cultural realities like cultural positioning, responsibilities and obligations.

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Keywords: climate change, resilience, communities, sustainability



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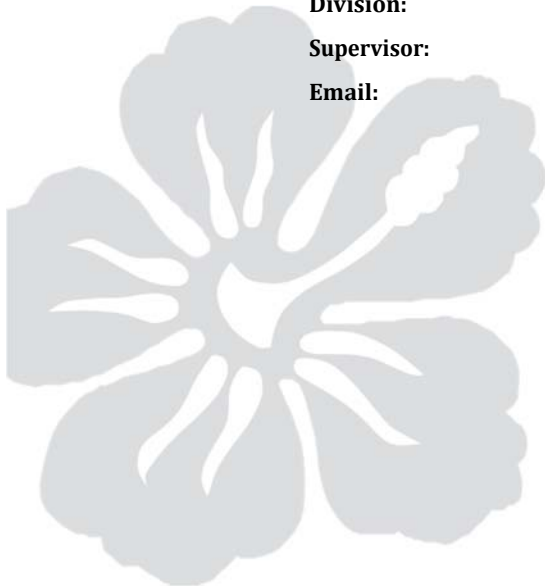
Numerator is from Samoa, studying towards a Master of Theology Degree in Biblical Studies (Old Testament). He is a minister for the Methodist Church in Samoa. Numerator holds a Bachelor of Divinity from Piula Theological College, Samoa. His study is funded by the Methodist Church in England (Salt Grant Scholarship) and the Methodist Church in Samoa.

Academic department: Theology and Religion, University of Otago

Division: Humanities

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RE-VISITING THE BABYLONIAN EXILE IN JEREMIAH 29:1-14:
ASAMOAN *LA-TO* READING

.....
Numerator Leuila Ofoia
.....

This project explores the feasibility of a Samoan approach to the Judahites' 'exile,' with particular reference to Jeremiah 29:1-14. The word 'exile' in the Hebrew Bible can imply discipline as an act of love, life, and hope rather than hatred and wrath. This 'positive' interpretation challenges the dominant negative Samoan view of the Babylonian Exile; influenced by Pacific missionary pioneers and the tacit acceptance of the Bible in Samoa.

Specifically, this project will develop a *la-to* (travel/drift) perspective as an alternative reading approach, reflecting the opportunity and hope that results from exploration. The project also raises concerns about apparent inaccuracies in the translation of the Samoan Bible that influence modern believers to be either victims of misinterpretation, or silently tolerate the limitations of the translation.

Ideally, a *la-to* approach is one that enables Samoan readers to engage with the Bible in light of their own contextual reality. By utilising this Oceanic, specifically Samoan *la-to* approach, this project will re-visit the Babylonian Exile in order to view it through a Samoan lens

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Keywords: exile, hope, *la-to*/drift, *tāfeaga*/restoration, translation, Samoan hermeneutics



AMARA SHAUKAT

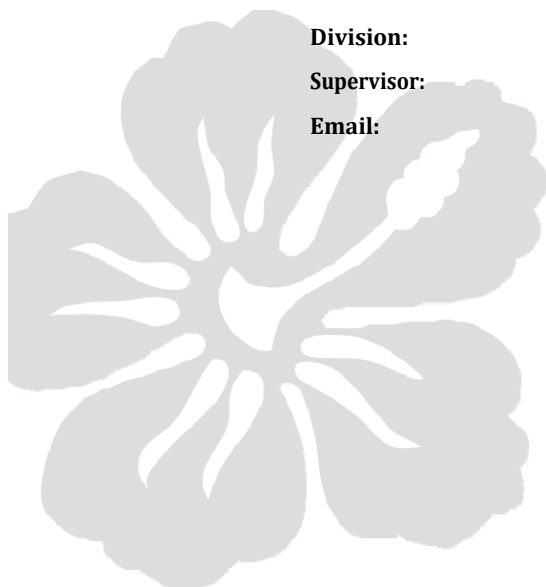
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Amara Shaukat is an international student from Pakistan. She completed an M.S. degree in Medical Physiology and Biochemistry at Punjab University, Pakistan, graduating with distinction. She is currently studying towards a PhD in Biochemistry supported by a University of Otago Doctoral Scholarship. She has also been involved in teaching and research activities at her home University.

Academic department: Biochemistry, School of Medical Sciences,
University of Otago

Division: Health Sciences

Supervisor: Professor Tony Merriman

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GENETIC ASSOCIATION OF INFLAMMATORY GENE *PPARGC1B*
WITH GOUT IN NEW ZEALAND POLYNESIAN AND EUROPEAN
GROUPS

.....
Amara Shaukat, Amanda Phipps-Green, Nicola Dalbeth, Lisa Stamp,
Jennie Harré Hindmarsh, Tony Merriman
.....

Gout is an auto-inflammatory arthritis caused by deposition of crystallized monosodium urate in and around tissues. Elevated serum urate levels (hyperuricemia) trigger the formation of monosodium urate crystals (MSU). The genetic basis of hyperuricemia is increasingly well-characterised, however, the genetic basis of the innate immune-mediated inflammatory response in gout pathogenesis is still unclear. Previous research has reported an association between the *PPARGC1B* missense variant *rs45520937* A-allele and gout risk in a Taiwan Han Chinese population.¹ Our aim was to replicate this finding in New Zealand Polynesian (Māori and Pacific) and European ancestral groups to investigate the association of *PPARGC1B* variant with gouty arthritis.

A total of 2680 clinically ascertained gout cases² and 2195 controls were included from the NZ Polynesian (Māori and Pacific) and European (from New Zealand and Europe) populations. Taqman® genotyping of *PPARGC1B*; *rs45520937* was undertaken, followed by multivariate-adjusted association analysis in R 3.2.2 version with gout as outcome.

We found a significant association between the A-allele of *rs45520937* variant and gout susceptibility in combined meta-analysed Polynesian sample sets (OR= 1.17, P_{OR}=0.02*) but not among European sample sets (OR= 0.96, P_{OR}=0.80). A stronger association of minor (A) allele was also observed with gout risk in males with higher self-reported Polynesian ancestry (OR= 1.47, P_{OR}=0.01*).

Our findings suggest a potential role of the inflammatory mediator *PPARGC1B* in the gout pathogenesis.

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Keywords: gout, innate immune-mediate inflammatory response, inflammatory gene *PPARGC1B*

- 1 Chang, W., Wu Y.J., Chung W., Chin, T.C., Chang, Y., Chen, D. and Hung, S (2016). Genetic variants of PPAR-gamma coactivator 1B augment NLRP3-mediated inflammation in gouty arthritis. *Rheumatology*, (in press).
- 2 Wallace, S.L., Robinson, H., Masi, A.T., Decker, J.L., McCarty D.J., Yu, T.F (1977). Preliminary criteria for the classification of the acute arthritis of primary gout. *Arthritis Rheumatology*, 20:895–90



ALLAN SUMB
.....

Allan is from PNG, studying towards a Master's degree in Tourism supported by a New Zealand Pacific Scholarship. He holds a BTour, a PGDip in Education, PGHTL Certificate in Education from Divine Word University and Certificate (III) in Tour Operations-APTC-Samoa Campus.

Academic department: Tourism, University of Otago

Division: School of Business

Supervisor: Associate Professor Brent Lovelock

Email: sumal469@student.otago.ac.nz



NEW ZEALAND TRAVELLERS' PERCEPTION OF SAFETY AND SECURITY ISSUES IN PNG

.....
Allan Sumb
.....

This paper investigates New Zealand travellers' perceptions of safety and security issues in Papua New Guinea. In the last couple of years, PNG Tourism Promotion Authority (PNGTPA) conducted a survey on international tourists' perception of destination PNG and identified some major issues such as safety and security, high cost of goods and services, lack of infrastructure and negative media publicity. This research focuses on safety and security issues which according to the literature are major constraints for many tourist destinations around the world. This qualitative project with New Zealand travellers who for the purpose of this study are Otago university staff employs an interpretive research paradigm. In-depth face to face interviews were conducted with participants to ascertain their views, opinions and experiences about safety and security in PNG. Data analysed using thematic analysis found that PNG is perceived as an unsafe tourism destination because of high crime rates, lack of basic infrastructure, health issues and political instability. The study also found a lack of tourism marketing in New Zealand. However, PNG has a huge potential for tourism, including cruise tourism due to its vast natural resources and unique culture. This study adds to existing literature by offering further insights on tourist perceptions of safety and security issues and their impact on the tourism industry.

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Keywords: perception, Papua New Guinea, tourism, safety and security issues



VANDA SYMON

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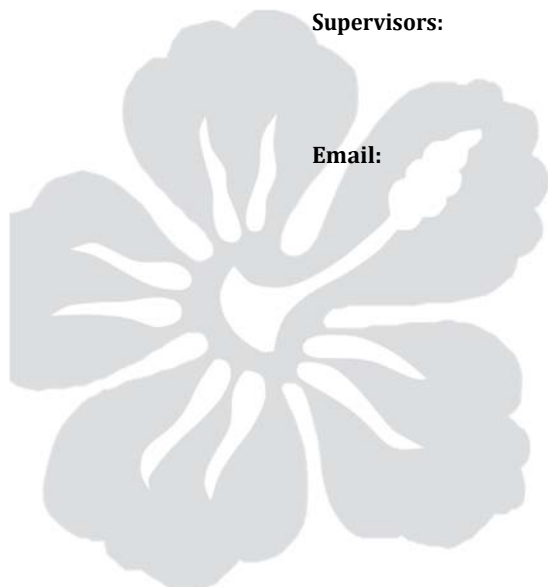
Vanda is of Fijian descent and is a final year PhD candidate in Science Communication. She has a BPharm (Hons) and PGCert in Pharmacy Research. Her PhD has been supported by a University of Otago Doctoral Scholarship. She is a published crime writer, and is examining the communication of science through crime fiction.

Academic department: School of Pharmacy, University of Otago

Division: Health Sciences

Supervisors: Associate Professor Natalie Medicott
Dr Susan Heydon
Professor Warwick Duncan (Sir John Walsh
Research Institute)

Email: vanda.symon@otago.ac.nz



SCIENCE IN CRIME FICTION: ACCURACY AND THE READER
EXPERIENCE

.....
Vanda Symon, Susan Heydon, Natalie J Medlicott, Jean S Fleming
.....

Many contemporary crime fiction novels contain forensic science as an integral part of their plot. There has been little research into the effects of that science on the reader, or the attitudes of writers to the science incorporated into their work. An anonymous online survey was undertaken to assess if readers believed the forensic science they encountered in crime fiction, and if accuracy was important to them. Likewise, writers of crime fiction were surveyed to examine if they ensured the science they presented in their fiction was accurate, and if they felt an obligation to ensure its veracity. Readers expected crime fiction to contain forensic science and believed that authors took care to ensure the science in their novels was true and accurate. Writers of crime fiction ensured the science they included was factually correct and felt an ethical obligation to do so. Both reader expectation and writer obligation aligned.

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Keywords: Science communication, crime fiction, forensic science,
popular media



ELIZABETH WILLIAMS

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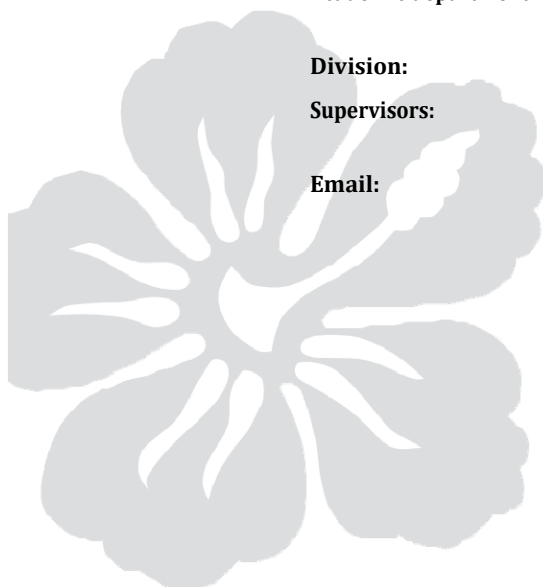
Elizabeth was born and raised in Samoa. She completed her first degree in dentistry at the Fiji School of Medicine in 2007 and then undertook a Postgraduate Diploma in Clinical Dentistry at the University of Otago, completed in 2013. She is now in her first year of a Doctorate in Clinical Dentistry majoring in Oral Pathology. She is a recipient of the University of Otago Pacific Island Doctoral Scholarship.

Academic department: Dentistry (Oral Diagnostic and Surgical Sciences), University of Otago

Division: Health Sciences

Supervisors: Professor Alison Rich, Dr Benedict Seo, Dr Haizal Hussaini, Dr Dawn Coates

Email: wilel916@student.otago.ac.nz



INVESTIGATION OF THE PRESENCE OF HUMAN
PAPILLOMAVIRUS IN VERRUCCAL-PAPILLARY LESIONS OF
THE ORAL CAVITY AND COMPARISON OF VIRAL DETECTION
METHODS

.....
Elizabeth Williams
.....

Human papillomaviruses (HPV) are known to induce cutaneous and mucosal proliferation of epithelial cells. HPVs are classified into low-risk (LR) and high-risk (HR) types, depending on their association with the development of benign, potentially malignant or malignant lesions. The HR HPV types have been implicated as causative agents in the development of head and neck squamous cell carcinomas (HNSCCs), and cervical cancer.

Oral verrucal-papillary lesions (OVPL) are a group of epithelial lesions thought to be associated with HPV. Epithelial lesions within the OVPL group are generally diagnosed based on their histological features with clinical correlation. Histological features typically include varying degrees of exophytic epithelial hyperplasia with or without keratosis, with or without koilocytes and epithelial dysplasia. Techniques used to detect HPV include immunohistochemistry (IHC), *in-situ* hybridization (ISH) and polymerase chain reaction (PCR).

Project aims are two-fold: 1) to investigate the presence of HR and LR HPV types in OVPL and 2) Juxtaposing the specificity and sensitivity of detection methods employed. The findings produced, in conjunction with existing clinical histopathological correlations for OVPL diagnoses, will hopefully enhance our understanding of the pathogenesis of OVPL.

Upon completion, this study will provide knowledge as to the efficiency of detection methods used to diagnose HPV in OVPL. It will also provide a better understanding about the roles of each HPV genotypes in OVPL, particularly their potential involvement in the malignant transformation of oral lesions. This information may be a useful guide to the mode of treatment. Furthermore, the information will be of significant diagnostic and prognostic value for clinicians and oral pathologists, ultimately benefiting the patient.

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Keywords: human papillomavirus, oral verrucal-papillary lesions,
detection methods



METITILANI AOROVEINE ALO

.....

Metitilani (Lani) is of Samoan descent and was born and raised in Auckland. In 2015, Lani graduated with a Bachelor of Music Majoring in Contemporary Performance. He is currently in the final stages of completing a Postgraduate Diploma in Music. He is a recipient of a Division of Humanities Pacific Island Bridging Scholarship for 2015/2016. Lani hopes to continue his studies towards a Masters of Music in 2017.

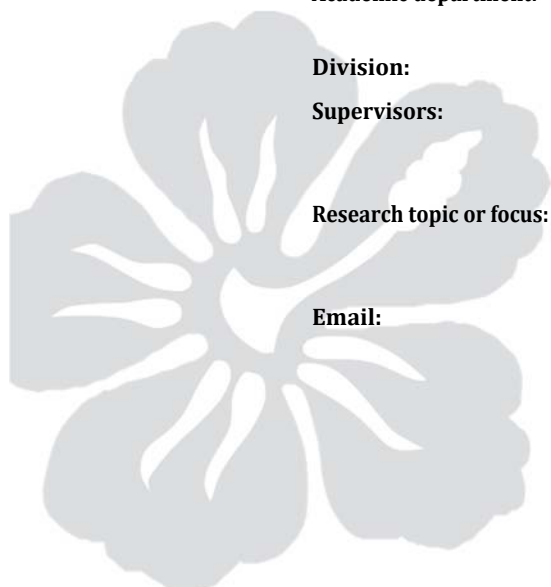
Academic department: Music, Theatre and Performing Arts,
University of Otago

Division: Humanities

Supervisors: Associate Professor Rob Burns,
Dr Jennifer Cattermole, Nick Hollamby,
Arlie McCormick

Research topic or focus: Nurturing and developing a culture of
unity, wellbeing and excellence within the
Otago Pacificana Choir.

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KALAMELI HELEN FAGASOAIA

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Kala is of Samoan decent, born and bred in Dunedin. She has spent the past five years managing various premier retail stores including the Dunedin branches of Levi's® and Tarocash. Kala is currently studying towards a Master of Business Administration. She intends to be a positive driver of change in New Zealand's business industry.

Academic department: Executive Education, University of Otago

Division: School of Business

Supervisor: Ian Lafferty

Research topic or focus: Human Resource Management

Email: fagka510@student.otago.ac.nz



LEATA LEIUA KERRIE FAITUA
.....

Leata is from Samoa. She is currently studying towards a Master's degree in International Studies (MIntSt). She recently completed her Diploma for Graduates (DipGrad) in Politics from the University of Otago. She holds a BA in Political Science and International Relations from Victoria University of Wellington. Recently, Leata briefly worked for the Office of the Clerk of the Legislative Assembly (OCLA) in Samoa.

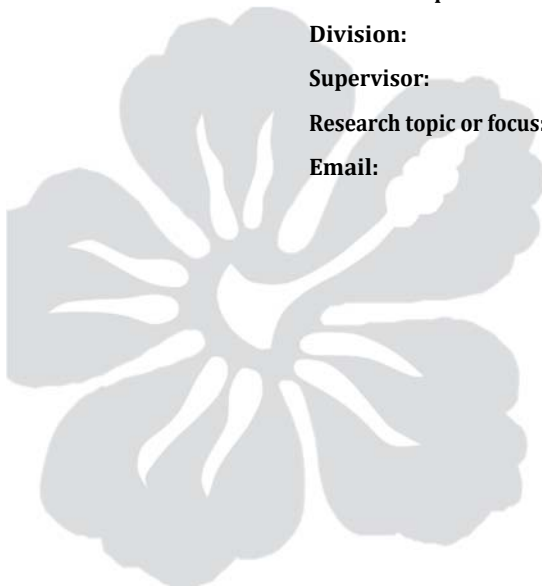
Academic department: Politics

Division: Humanities

Supervisor: Dr Iati Iati

Research topic or focus: Corruption and Samoa's political system

Email: faile903@student.otago.ac.nz





MARY JANE KIVALU

.....
Mary Jane is Tongan, and grew up in Otago, South Auckland. She recently completed a Bachelor of Commerce, and is now undertaking a Master of Business Administration degree at the University of Otago. She is the President of the New Zealand Tongan Tertiary Students' Association, and was the first female Housemaster and Senior Housemaster at the Otago Boys High School Hostel.

Academic department: Executive Education, University of Otago

Division: School of Business

Supervisor: Ian Lafferty

Research topic or focus: Influence of health management systems and literacy on Pacific people in NZ

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CHARLOTTE UNASA

.....

Charlotte is of Samoan and Cook Island ethnicity. She is currently doing a Master of Dietetics, having completed a BSc (majoring in Human Nutrition and Foodservice Management) in 2015. Charlotte is aware of the high obesity rate amongst NZ Pacific Islanders; she endeavours to bring her expertise in nutrition to the Pacific community in order to tackle this epidemic and 'bridge the gap' in health inequalities between PIs and non-PIs.

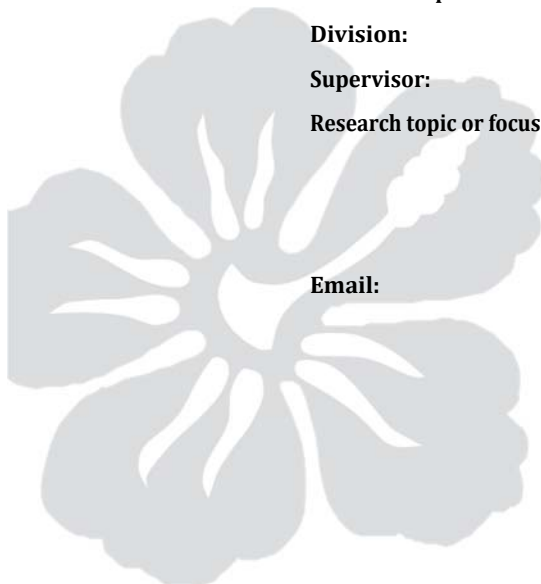
Academic department: Human Nutrition, University of Otago

Division: Sciences

Supervisor: Dr Lisa TeMorenga

Research topic or focus: Reliability and validity of free sugars estimated by a brief FFQ instrument using a free sugars biomarker ($\delta^{13}C$) in red blood cells as a reference standard for free sugars intakes.

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Faafetai Tele Lava

The Pacific Postgraduate Reference Group was established in late 2002 to support our research students via monthly seminars and meetings – to be 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*. The first symposium was held in 2004.

Symposium number XIII, as in previous years, has come together through the hard work of many people who gave their time, intellect and experience to ensure that our students' voices are heard and their wonderful work shared and encouraged. This year has been a challenging one as we struggled to find time and especially the appropriate support to enable the Centre to host monthly seminars and to provide our postgrad students with the very important monthly *tapuaiga* and *faamalosiau* seminars. So the idea of a symposium as we have done over the last 12 years was a really huge ask but we must persevere onwards and remember never to lose focus on the importance of the role this group plays in the academic journey of our postgraduate *fanau*/students.

I am very proud that WE did persevere and I would especially like to pay tribute to our hardworking team: the wonderful editorial team – Dr Mele Taumoepeau, Dr Rosalina Richards, Dr Patrick Vakaoti and Dr Nanai Iati Iati who themselves are the very reason why we should continue to persevere. Thank you to Alison Finigan, the Project Officer who coordinated *Pacific Voices* this year. *Vinaka Vaka Levu* to our University leadership for continuing to lead for Pacific here at Otago: Professor Vernon Squire, Deputy Vice-Chancellor (Academic), for providing the Keynote Address, Professor Helen Nicholson, Deputy Vice-Chancellor (External Engagement), Professor Keith Hunter, Pro-Vice-Chancellor, Sciences, and Professor George Benwell, Pro-Vice-Chancellor, Commerce/Dean, School of Business, for being our sessional chairs. I would also like to acknowledge the wonderful support by the Graduate Research School Dean, Professor Rachel Spronken-Smith, for providing the Foreword for this publication as well as financial support to enable our North Island-based students to take part in this Symposium.

For being Pacific

It's easy to say no, and give up, and not having to worry about an extra responsibility

Way too easy...but

Ae a faapefea a taeao?

But what becomes of tomorrow

Our point of difference

Our fanau and the dreams of our matua, our ancestors

What becomes

If it was that easy?

Kia Monuina Pacific Voices XIII!

Tofilau Nina Kirifi-Alai

Manager, Pacific Islands Centre

Appendix

Introduction to *Pacific Voices XII*

24 September 2015
John Patrick
Chief Operating Office
University of Otago

Kia Ora
Talofa Lava (Samoa)
Malo e Lelei (Tonga)
Kia Orana (Cook Islands)
Fakalofa Lahi Atu (Niue)
Bula Vinaka (Fiji)
Namaste (Fiji Indian)
Malo ni (Tokelau)
Faka lofa atu (Tuvalu)
Good morning

My name is John Patrick and I am the Chief Operating Officer of this fine University of Otago.

It is my pleasure to welcome all of you to the Pacific Voices Postgraduate Symposium. The first symposium was held on this exact day in 2004 with 15 students presenting their research. The symposium booklet of 2004 hoped that the symposium would become a regular event. That expression of hope has turned into reality and here we are at the 12th symposium with research extracts from 33 students from every academic division in the University

Pacific Voices is a celebration of all things Pacific as seen through the eyes of our Pacific postgraduate students. It is an opportunity for them to display their research and to excite us with their talent and their knowledge.

About 4% of University of Otago students are of Pacific origin. This is up from about 3% in 2010 and represents over 719 enrolled students.

The University of Otago is proud of its Pacific students and the support that is provided for them by both academic and support staff. We are particularly pleased that the quality of their learning outcomes is growing, as is the quality of research done by Pacific postgraduate students.

Much of this has resulted from the University's commitment to furthering the academic progress of Pacific students and supporting Pacific staff and was formalised in the Pacific Research Protocols which were approved by University Council in November 2011.

The University established a Pacific Islands Centre in 2001 to provide academic and social support for students from the Pacific and of Pacific heritage. The Centre continues to grow and flourish under the [very] watchful eye, and unique skills, of Tofilau Nina Kirifi-Alai.

In 2006, the University of Otago's Pacific People's Reference Group was established to advise the University on how to achieve its goals and objectives for Pacific peoples, and how these could be further developed in ways that align with the Pacific community. Consequently research related to the Pacific community became a focus.

The University has continued to expand its connections with and interests in the Pacific community, the development of staff and students with Pacific affiliations, and Pacific related research.

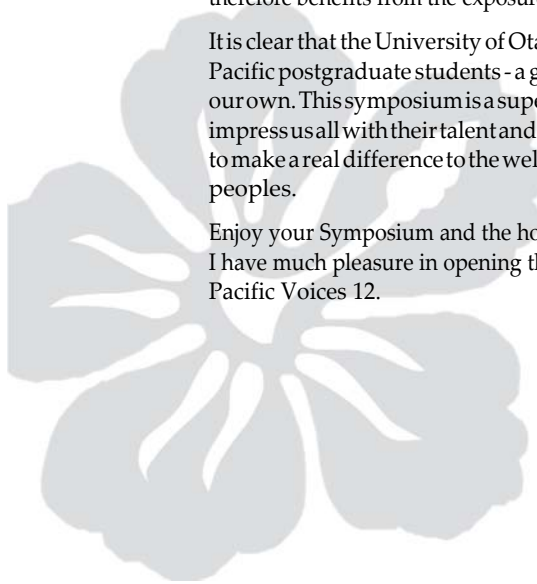
When I reviewed the research topics for this symposium, I was struck with the range of research presentations that you will be able to enjoy.

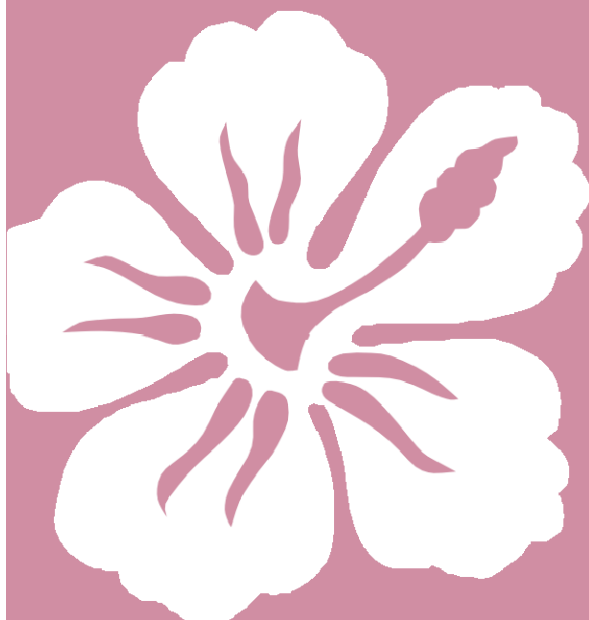
The subject range covers everything from the health of Pacific peoples, to Pacific archaeology, to forensic science to Harry Potter. It even covers such 'today' topics as computer apps and Facebook (not something I know a lot about being the age that I am). Interestingly, there is also research that deals with the burnout of Pacific rugby players, a topic that is particularly relevant during the present Rugby World Cup with teams from Samoa, Tonga and Fiji competing. Players of Pacific ethnicity are making their presence felt in several of the world's best teams, showcasing their strength and their skills.

I was particularly interested to see some research on community resilience to climate change in Samoa. While climate change is a world-wide problem, the indicators suggest multiple concerns for human and natural communities in the Pacific Islands region due to rising sea levels, damage to traditional food sources and shortage of freshwater. It is a problem that requires a worldwide response and therefore benefits from the exposure and communication that research provides.

It is clear that the University of Otago has a dedicated and talented group of Pacific postgraduate students - a group of students that we are proud to call our own. This symposium is a superb way for them to showcase their work and impress us all with their talent and their depth of knowledge. And of course, to make a real difference to the well-being of Pacific communities and Pacific peoples.

Enjoy your Symposium and the hospitality of the University of Otago.
I have much pleasure in opening this Pacific Postgraduate Symposium –
Pacific Voices 12.





POSTGRADUATE



Pacific Voices XIII

Pacific Postgraduate Symposium
14 October 2016

Pacific Islands Centre | University of Otago
Dunedin 9054 | New Zealand