

Office of the Pro Vice Chancellor Research

RESEARCH newsletter

Issue No. 2 | May, 2019

Research Highlights

Professor Rebekah Brown, Provost Research at Monash University visited Fiji National University to meet her team Dr Amelia Turagabeci, Dr Donald Wilson, Professor Paul Jagals, Mr. Autiko Tela and Mrs. Silvia Visoni from the School of Public Health, College of Medicine, Nursing and Health Sciences working on the project Revitalising Informal Settlements and their Environments (RISE) www.RISE-program.org. RISE is an action-research program working at the intersection of health, environment, water and sanitation in urban informal settlements. Underpinned by the emerging discipline of 'planetary health', the success of RISE will be measured by the health and well-being of residents – particularly children under five years of age and their surrounding environment. Fiji has a number of informal settlements for which this program

intends to reduce both environmental contamination itself and the likelihood of human contact with contaminants. Multiple benefits are anticipated, including improved community health, fewer infections, better intestinal health among children, increased food production, and reduced gender inequality through the provision of secure domestic sanitation facilities and reliable water supplies.

Fiji National University is a strategic partner on the RISE project working closely with Monash University, the University of Melbourne, Stanford University, Emory University, University of Cambridge, Hasanuddin University, the University of the South Pacific, and United Nations University International. This project is funded by Wellcome Trust and Asian Development Bank. FNU's contribution to the funding is \$900,000.00.



Pro Vice Chancellor Professor Mohini Singh welcomed Professor Rebekah Brown in Fiji.



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Watershed Interventions for Systems Health in Fiji

Dr Donald Wilson from the College of Medicine, Nursing and Health Sciences secured further funding for the project 'Watershed Interventions for Systems Health' in collaboration with the University of Sydney, funded by National Health Medical Research Council (NHMRC) in Australia. The National Health and Medical Research Council (NHMRC) funded high quality health and medical research to build research

capability, support researchers, encourage the translation of research into better health outcomes and promote the highest ethical standards for health and medical research <https://beta.health.gov.au/contacts/national-health-and-medical-research-council-nhmrc>

FNU attained \$479,951.00 for this project.

Research in Progress for a Revolutionary Mobile App

The Fiji National University's (FNU) College of Medicine, Nursing and Health Sciences (CMNHS) is working with Texas A&M University and the New York Academy of Medicine (NYAM) on a research to develop a ground-breaking mobile guideline application to assist nurses in identifying patients with risk of depression and suicide (mental health patients).

This ongoing research is in its final stages and is expected to be completed by the end of July 2019, with a new phase beginning in early 2020. The mobile application will assist nurses in Fiji and the region in early detection of patients that require mental

health diagnosis at the different stages of risks. The mobile app will also help eliminate human error normally made during calculations using paper based guidelines.

This research is important because it will improve the detection and treatment of depression and reduce suicide risk. It will also help nurses identify patients with mental health issues by reducing errors and maintaining patient safety.



Accreditation of the College Human Health Research Ethics Committee

The CMNHS, College Human Health Research Ethics Committee (CHREC) was awarded an accreditation certificate by the Fiji National Human Research Ethics Committee (FNHREC) for successfully meeting the conditions and requirements of a Human Research Ethics Committee. The award took place during a Fiji National Consultation Meeting on Governance of National Human Research Ethics in Fiji, held at the Tanoa International Hotel, Nadi, on 26th March, 2019.

The National Consultation meeting was opened by the Minister for Health and Medical Services (MoHMS), Honorable Dr Ifereimi Waqainabete. In his opening address he said that "As a basic principle according to the World Health Organization (WHO), research ethics governs the standards of conduct for scientific researchers. The intention is to enable researchers to adhere to ethical principles in order to protect the dignity, rights and welfare of research participants, especially in communities around Fiji."

Dr David Wilson, Associate Dean Research at the College of Medicine, Nursing and Health and Sciences received the



accreditation certificate from Dr Eric Rafai who represented the FNHREC at the MoHMS ceremony. Mrs Etivina Lovo delivered a presentation of the CHREC activities at the event. The Pro Vice Chancellor Research, Professor

Mohini Singh attended the event to support the team.

The significance of an accreditation certificate awarded to a human health research ethics committee is that the FNHREC needs to be assured that the human research ethics committee has the capacity to offer protection to human participants in research. The accreditation of CHREC means that it has proven institutional effectiveness as assessed by the accrediting process and verification team from the FNHREC. The assessment recognized that CHREC fulfilled international and national standards of governance of human research ethics. Fiji National University competed for this award with the University of the South Pacific Research Ethics Committee and the University of Fiji Research Committees.

Journal Publications

Tripathi, P., Shah, S., Kashyap, S. D., & Tripathi, A. Fruit yield and quality characteristics of high density *Prunus persica* (L.) Batsch plantation intercropped with medicinal and aromatic plants in the Indian Western Himalayas. *Agroforestry Systems*, 1-12. <https://doi.org/10.1007/s10457-018-0276-9> - Q1

Shah, S., Moroca, A., & Bhat, J. A. (2018). Neo-traditional approaches for ensuring food security in Fiji Islands. *Environmental development*. <https://doi.org/10.1016/j.envdev.2018.11.001> - Q1

Schultz, H., Hohnhold, R. J., Taylor, G. A., Bury, S. J., Bliss, T., Ismar, S. M., ... & Dennis, T. E. (2018). Non-breeding distribution and activity patterns in a temperate population of brown skua.

Marine Ecology Progress Series, 603, 215-226. <https://doi.org/10.3354/meps12720> - Q1

Pala, N. A., Sarkar, B. C., Shukla, G., Chettri, N., Deb, S., Bhat, J. A., Chakravarty, S. (2019). Floristic composition and utilization of ethnomedicinal plant species in home gardens of the Eastern Himalaya. *Journal of Ethnobiology and Ethnomedicine*. 15(14). <https://doi.org/10.1186/s13002-019-0293-4> - Q1

Cooke, G. S., Andrieux-Meyer, I., Applegate, T. L., Atun, R., Burry, J. R., Cheinquer, H., Dusheiko, G., et al. (2019). Accelerating the elimination of viral hepatitis: a Lancet Gastroenterology & Hepatology Commission. *The Lancet Gastroenterology & Hepatology*, 4(2), 135-184. <https://doi.org/10.1016/S2468->



Journal Publications

1253(18)30270-X – Q1

Prasad, R. D., & Raturi, A. (2019). Low carbon alternatives and their implications for Fiji's electricity sector. *Utilities Policy*, 56, 1-19. <https://doi.org/10.1016/j.jup.2018.10.007>

Sharma, R., Sharma, A., Patil, A., & Tsunoda, T. (2019). Discovering MoRFs by trisecting intrinsically disordered protein sequence into terminals and middle regions. *BMC bioinformatics*, 19(13), 378. <https://doi.org/10.1186/s12859-018-2396-7>

Khan, G. A., Bhattacharya, S., Maji, U., Das, R., Sinha, A. K., Ghosh, C., & Maiti, S. (2019). Antidiabetic role of a novel protein from garlic via NO in expression of Glut-4/insulin in liver of alloxan induced diabetic mice. *Biomedicine & Pharmacotherapy*, 111, 1302-1314. <https://doi.org/10.1016/j.biopha.2019.01.036>

Khan, G. A., Bhagat, S., & Alam, M. I. (2019). PGE2-induced

migration of human brain endothelial cell is mediated through protein kinase A in cooperation of EP receptors. *Journal of leukocyte biology*. <https://doi.org/10.1002/JLB.2A0918-361R>

Prasad, R. D., and Raturi, A.: 'Fuel demand and emissions for maritime sector in Fiji: Current status and low-carbon strategies', *Marine Policy*, vol. 102, 2019, pp.40-50. <https://doi.org/10.1016/j.marpol.2019.01.008>

Sharma, A., Lysenko, A., López, Y., Dehjangi, A., Sharma, R., Reddy, H., ... & Tsunoda, T. (2019). HseSUMO: Sumoylation site prediction using half-sphere exposures of amino acids residues. *BMC genomics*, 19(9), 982. <https://doi.org/10.1186/s12864-018-5206-8>

Vera, N., Young, L., & Sweet, L. (2019). Assessing the Alignment of Pharmacotherapeutics Course Outcomes With Topic Outcomes. *American journal of pharmaceutical education*, 83(3), 6545. <https://doi.org/10.5688/ajpe6545>



Seminar – Your Publication Record is Your Academic Recognition

Following our Vice Chancellor's presentation on the importance of research and publishing in academia, and Professor Paul Iji's presentation on Publishing your Research, our next seminar is a panel discussion on getting published in Q1 journals and achieving

a reputable h-index. This panel discussion is on the experiences of four of our own (FNU's) Early Career Researchers on getting published in Q1 journals. The panel will be chaired by Professor Mohini Singh, Pro Vice Chancellor Research.

Our panel members are:



DR. PATRICK MARK SINGH

**College of Engineering, Science and Technology
Fiji National University**

Dr Patrick Mark Singh

Dr Patrick Mark Singh, an Assistant Professor in the School of Mechanical Engineering at Fiji National University. He graduated with a doctorate degree from Mokpo National University in South Korea in February, 2018. Patrick has published several highly ranked journal papers, and has achieved a H-Index of 6. He achieved six best paper awards for conference papers and the focus of his research is on turbo machinery and renewable energy and also conducted research projects at national level in the same field. One of his most notable achievements is the design of a hydrofoil for tidal current turbines for which he has been awarded with best paper by the Korean Society of

Mechanical Engineers. He also designed an experimental test rig on a pump-turbine system for energy storage systems for his laboratory. Patrick's current focus is on the development of energy independent islands in the Pacific Island Countries (PICs). In addition to writing scholarly publication and lecturing, he enjoys playing soccer and hiking as a hobby. Patrick Singh is a winner of the inaugural Vice Chancellor's Research Excellence for Early Career Research at FNU.

MRS. RAVITA PRASAD

**College of Engineering, Science and Technology
Fiji National University**

Ravita Prasad

Ravita Prasad is a lecturer in Physics Department in School of Pure Sciences. She received her B.Sc. and M.Sc. degrees from The University of the South Pacific, Suva, Fiji, in 2004 and 2008, respectively. She is currently a PhD candidate in Physics at The University of the South Pacific. Her research interests include wind energy resource assessments, biomass energy, long-term energy planning for low carbon transformations of energy systems. Last year she was part of a team for writing a report on "Fiji's Low Emission Development Strategy 2018-2050" which Fiji's Hon. Prime Minister presented to the world at COP24 in Poland. Ravita is the author or co-author of many papers and book chapters published in international journals. She has a citation H-Index of 7 and i10-Index of 7.



MR. RONESH SHARMA

**College of Engineering, Science and Technology
Fiji National University**

**Ronesh Sharma**

Ronesh Sharma is a Senior Instructor in the School of Electrical and Electronics Engineering. He received the BTech degree from the University of the South Pacific (USP), Suva, Fiji and MEng degree from Mokpo National University, South Korea. He is now near completion of his PhD degree in Engineering at University of the South Pacific, Suva, Fiji. His research interests include artificial intelligence and machine learning algorithms; bioinformatics; data mining; pattern recognition and control engineering problems. His current research is focused on protein secondary, fold and structural class prediction problems; protein subcellular localization problems; prediction of disease-associated function regions and human cancer classification. His current research is in collaboration with Human Genome Center, The Institute of Medical Science, The University of Tokyo, Tokyo, Japan; RIKEN Center for Integrative Medical Science, Yokohama, Japan and

The University of the South Pacific, Suva, Fiji.

He has published one book chapter, seven highly ranked journal papers and has a citation H-Index of 6 and i10-Index of 4. His contribution to knowledge is in the discipline of Electrical and Electronics Engineering, Bioinformatics and Artificial Intelligence.

DR. LAVINESH RAJ

**College of Medicine, Nursing and Health Sciences
Fiji National University**

**Dr Lavinesh Raj**

Dr Lavinesh Raj is a lecturer in Emergency Medicine at the College of Medicine, Nursing and Health Sciences. He completed his MBBS degree from the Fiji School Medicine, Suva, Fiji and his Master of Emergency Medicine from the Fiji National University, Suva, Fiji. He is one of the pioneers of the Emergency Medicine specialty in Fiji. He is dedicated to improving ED Trauma Care and Pre-Hospital care provision for all Fijians. He is also the coordinator for the Pre-Hospital care course being provided by the FNU. His research interests include trauma care, pre-hospital care and development and wellness for health care workers.

His first publication is a Q1 journal article.

Time: 2:30pm – 4:30pm | **Date:** Friday 24th May, 2019

Venue: Room (B318) Samabula Campus



Invited Talks

Professor Unaisi Baba delivered an address on Development and different winds of change in education in the South Pacific

Speaking at the 3rd International Technology, Education, Assessment and Management (T.E.A.M) Conference at the University of Guam, Fiji National University's (FNU), College of Humanities and Education (CHE) Professor, Unaisi Nabobo Baba said education has played a key role in the balance between the modern advancement of Pacific people as well as helping them affirm and develop /share their indigenous knowledge heritages, philosophies, stories and life-ways and preserve their culture and traditions.

Professor Unaisi Walu Rauluni Nabobo Baba is a Professor of Education at the Fiji National University (FNU) and Academic Leader, FNU Natabua Campus in Lautoka. With about 32 years of working in the field of education (mostly higher education and development) Professor Baba's work has been in teaching, researching, publication and other educational and development related work in the Pacific Islands.

Dr Jimaima Lako delivered an address at the International Symposium on “Understanding the Double Burden of Malnutrition for Effective Intervention” in Vienna, Austria.

Dr Lako, Associate Dean Research with the College of Engineering, Science and Technology recently represented FNU and the Government of Fiji at the International Symposium on Understanding the Double Burden of Malnutrition for Effective Intervention in Vienna, Austria.

In her presentation on Major Policy and Programme Gaps and Improving Agri-Nutrition Outcomes in Fiji, Dr Lako highlighted the prevalence of double burden malnutrition, with 98 per cent of the population at moderate to high risk of developing non-communicable diseases (NCDs) such as cancer, stroke, heart attack, asthma, and diabetes. She also made key recommendations for improving policy and governance, research and product development, education, outreach and partnerships.



Symposium

Symposium organised to boost research in Physiotherapy

In an effort to encourage more research in the field of physiotherapy and publish findings, the Fiji National University's (FNU) College of Medicine, Nursing and Health Sciences (CMNHS) Department of Physiology and Physiotherapy organised a Physiotherapy Research Symposium. The two-day symposium which was held at the CMNHS Hoodless House in Suva recently, attracted 40 participants including staff, students and representatives from the Ministry of Education and Ministry of Health.

Head of Department, Dr Venasio Ramabuke, said this was an important step towards research information propagation and highlighting their effort in research production. Students have partnered with staff in conducting various research projects, so at the same time they learn the processes of conducting research Mr Ramabuka highlighted.

College of Agriculture, Fisheries and Forestry Collaborating with Ministry of Agriculture, Rural and Maritime Development, Waterways and Environment

Professor Paul Iji, College Dean and Dr Champathi Gunathilake, Associate Dean Research of College of Agriculture, Fisheries and Forestry (CAFF) will be working with the Ministry of Agriculture Director Research and research staff at the Koronivia Research Station, to develop potential research groups.

A Memorandum of Understanding (MOU) was signed between the Ministry of Agriculture, Rural and Maritime Development, Waterways and Environment and College of Agriculture, Fisheries and Forestry to adopt a model that would enable government to support key research being conducted. This model will assist in the commercial applications of the research findings.

Call for Book Chapters

Legal Regulations, Implications, and Issues Surrounding Digital Data

<https://www.igi-global.com/publish/call-for-papers/call-details/3999>

Full Chapters Due: September 12, 2019

Submission Date: January 5, 2020

The increased use of the internet over the last decade or two and specifically the use of social media has resulted in an enormous amount of digital data including personal information being available online. Individuals, governments and corporations are all involved in collecting, storing, using, disclosing and transferring information online. The growth of artificial intelligence is also starting to have an impact for individuals, governments and corporations as it enables the effective analysis of Big Data.

This book will examine the legal issues or regulations around digital data and how the law applies to online issues such as defamation, cyberbullying and scams, data protection and privacy. It will also discuss the legal implications of such technologies as artificial intelligence and Blockchain.

Scholarship

The Tertiary Scholarship and Loans Board ("TSLB") wishes to invite applications for the following overseas scholarships: Commonwealth Scholarship and Fellowship Plan Anniversary Endowment Fund Scholarships

Applicants must apply for the scholarship using the Association of Commonwealth Universities website at <https://www.acu.ac.uk/scholarships/commonwealth-scholarships/>

Further details of the scholarships including eligibility criteria, programs and universities that these awards cover is available on TSLB website www.tslb.com.fj

Application Deadline: 13 July 2018.

Pacific Islands Health Research Symposium (PIHRS)

Date: August 29-30, 2019

Venue: Pearl Resort

Registration: [https:// www.fnu.ac.fj/research/events/pacific-islands-health-research-symposium](https://www.fnu.ac.fj/research/events/pacific-islands-health-research-symposium) [Open to staff and students.]

