The University of Papua New Guinea  
School of Medicine and Health Sciences


Introduction
The School of Medicine and Health Sciences has continued to promote and improve research in relevant areas of concern to the nation. These areas include micronutrients (vitamins, iodine and minerals), molecular genetics of diseases (malaria, cancer and HIV), drug discovery (anti-microbial, anti-TB, anti-malaria, anti-HIV and anti-cancer screening), snake venom and snakebite, traditional medicine, and betel nut etc. The growth of research capacity in recent years combined with international collaboration and external funding support has provided enormous opportunities for training and development in the School. This report is intended to provide a brief overview of research activities in the School of Medicine and Health Sciences for the years 2007 and 2008 and growth into the future.

2007 Research Report

Research Guidelines
A draft Research Guideline for the School was circulated in April 2007 for comments. The Guideline was extracted from a more detailed document prepared by the former Chairman of the School Research Committee. It is apparent that the document or its principles may have served in the past the basis for the School Research Committee’s establishment. The document outlined specific procedures for the conduct of research in the School of Medicine and Health Sciences. It is hoped that the School will work towards the formalization of a research policy consistent with both the University’s and the National Department of Health’s research policies. The Research Committee requests all academics and researchers to adhere to the best research practices in the conduct of any research investigations conducted in the School and affiliated national institutions.

Research Approval and Grants
The School did not receive any funds from the University for Research in 2007 and therefore no funds were dispersed for research other than for some student projects.

The School Research Committee met twice, in May and November 2007. Funds were not received from the University for research programs in the School and therefore no funds were dispersed. A draft Research Guideline was tabled but deferred to a later meeting. The first meeting approved research proposals especially by B.Med.Sci students (4) and final year pharmacy students (22). Each student project was allocated K500, subject to availability of research funds. It is understood that only the B.Med.Sci students accessed funds from the University.

In November 2007, the School Research Committee endorsed research proposals for funding through the Office of Higher Education Science and Technology Initiative in which K500, 000 was made available to universities in the country for research. The OHE funding was intended to stimulate scientific research and innovation and thereby support the development of products. The Committee received and reviewed 10 research proposals and submitted 7 to OHE. Four
proposals were approved for funding. Additional funds were also granted to 3 proposals under the PNG Institute of Biodiversity funding mechanism.

Successful research grants clearly demonstrated the emerging interest in key areas of research that included, HIV, iodine determination, micronutrients, traditional medicine, drug discovery and snake venom. These research programs have provided research training for B.Med.Sc and other undergraduate students. The issue of appropriate research funding for undergraduate programs will continue to be addressed by the School Research Committee and the Office of the Executive Dean. The following grants were externally awarded:

Dr. Victor Temple (Principal Investigator)
Co-Investigators: Professor John Vince, Dr. David Mokela, Professor Sir Isi Kevau, Ms. Cecily Kaira and Ms. Cathy Kupe. "Assessment and monitoring of vitamin A status of infants, age 6 months to 59 months attending paediatric clinic in PMGH", K35, 750

Associate Professor Teatulohi Matainaho (Principal Investigator)
Co-Investigators: Mr. Owen Paiva and Mr. David Williams
"Isolation of toxic peptides from Micropechis Ikaheka (New Guinea Small Eyed Snake) venom", K40, 000 (OHE), K20, 000 (PNG Institute of Biodiversity Award)

Associate Professor Lohi Matainaho (Principal Investigator)
Co-Investigators: Mr. Paul Monda Jr. Mr. Lothe Stanley, Mr. Jeffrey Noro, Professor Louis Barrows, Dr. Chris Pond, Professor Chris Ireland, Ms. Mary-Kay Harper and Professor Phil Crews. "Chemical and pharmacological investigation of PNG marine sponges for anti-microbial activity", K20, 000 (OHE), K20, 000 (PNG Institute of Biodiversity Award)

Associate Professor Lohi Matainaho (Principal Investigator)
Co-Investigators: Professor Louis Barrows, Dr. Prem Rai, Ms. Neysa Mai and Ms. Hefa Kemung. Chemical and pharmacological standardization of (traditional) medicinal plant preparations in PNG for treatment of microbial infections", K20, 000 (OHE), K20, 000 (PNG Institute of Biodiversity Award)

2007 School Publications

Publications in Journals


Desjardine, K., Pereira, A., Wright, H., Matainaho, T., Kelly, M., Andersen, R. Tauramamide, a lipopeptide antibiotic produced in culture by Brevibacillus laterosporus isolated from a marine habitat: structure elucidation and synthesis. Journal of Natural Products (2007) 70: 1850-1853


Owen, P.O., Matainaho, T., Sirois, M., Johns, T. Endothelial cytoprotection from oxidized LDL by some crude Melanesian plant extracts is not related to their antioxidant capacity. Journal of Biochemical & Molecular Toxicology (2007) 21 (5): 231-242


Publications in Proceedings of Conferences

Anga, G., Vince, J., Kaupa, M. Early weaning and pneumonia in infants in PNG. Proceedings of PNG 43rd Annual Medical Symposium, Port Moresby, September, 2007

Allison, W., Kiromat, M., Vince, J., Schaefer, M., Kaldor, J. Predictors of HIV testing and serostatus amongst children admitted to the PMGH. Proceedings of PNG 43rd Annual Medical Symposium, Port Moresby, September, 2007


Presentations in Conferences, Seminars and Workshop


Temple, V. J. (Resource person): Consultation workshop on HIV Food and Nutrition in PNG. Sponsored by NDOH and Albion Street Centre Sydney Australia: WHO Conference Room, NDOH PSA House Port Moresby, November 2007


Chapters in Books


Authored and Edited Books


Reports (Grey Literature)


Tefuarani, N. Operation Open Heart: August Visit: 2007

Research Theses


Antonia Kumbia and Mary Bagita: A randomized controlled trial of management of the choriamnion in cases of prolonged latent phase of labor: M.Med (O&G): 2007: Principal Supervisor Professor Glen Mola

Angela Seginami: Sexual assault at the Port Moresby General Hospital: M.Med (O&G): 2007: Principal Supervisor Professor Glen Mola

H. Joel: Blood loss at caearecan section: M.Med (O&G): 2007: Principal Supervisor Professor Glen Mola

Research Outcome

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<th>Year</th>
<th>Books</th>
<th>Book Chapters</th>
<th>Papers in Journals</th>
<th>Conference Papers/Presentations</th>
<th>Reports</th>
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![Graph showing research outcomes]

- Books
- Book Chapters
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- Conference Papers/Presentations
- Reports
Research Funds
The University Research Committee (URC) early this year proposed the following research budget allocations for 2008 and the following details were extracted from documents tabled and discussed in the University Research Committee:

- University Research Centre Operational Funds: K30,000.00
- Research Funds for allocations to Schools: K300,000.00
- Conference Travel Grants: K75,000.00
- Research Centre’s Grants: K100,000.00
- Research Infrastructure Grants: K100,000.00

**Total UPNG Research Grant:** K605,000.00

Following deliberations by the URC it was agreed that each school will be allocated K60,000.00 for research and K15,000.00 for Conference Travel. Each school was expected to report to the Committee as to how these funds are allocated or used.

Further, it was also recommended that each of the five Research Centres would receive K20,000.00 and therefore responsible for reporting to the Committee on the use of funds in their respective annual reports.

The committee also decided that Research Infrastructure Grant (RIG) fund allocations will be available depending on the nature of the applications from schools, research centres, division/discipline and/or individual staff. The applications for these grants are available to those interested in applying.

Research Approval and Activities
The School Research Committee met in April and August 2008 to approve and give ethical clearance to research proposals by academic staff and students. It was decided that an amount of K200.00 would be allocated to each undergraduate student research proposal. However, it is not clear whether funds were accessed or used by students. Further, the following research proposals were given funding approval:

Dr. Leslie Kawa (Postgraduate MMED): “Risk factors in being non-complaint to TB treatment among TB patients in PMGH: prevalence of drug resistance among TB patients in PMGH”, K474

Dr. Cathy Timothy (Postgraduate MMED): “CD4 counts in TB and HIV patients at PMGH: from anti-retroviral treatment access to adherence”, K4, 200

Dr. Seth Fose (Principal Investigator)
Co-Investigators: Dr. Jacob Morewaya, Mr. Gairo Gerega and Ms. Ruth Magaye. “A study on the histochemical identification of malignant lymphomas”, K4, 365

Dr. Phillip G. K. Kigodi: “Assessment of knowledge, attitudes and practices and sorcery of students in the School of Medicine and Health Sciences”, K544

Apart from UPNG research funds the following research proposals received Office of Higher Education funding.
Mr. Gairo Geregar (Principal Investigator)
Co-Investigators: Dr. Jacob Morewaya and Ms. Daisy Tui-Amoa. The differentiation and distribution of malignant lymphoma subtypes in Papua New Guinea: an immunohistological study from 1994 to 2003”, K30, 000 (OHE)

Dr. Florence Muga (Principal Investigator)
“Computerized Tomographic findings in brains of Papua New Guineans patients suffering from first episodes schizophrenia or marijuana-induced psychosis”, K37, 650 (OHE)

Associate Professor Victor Temple (Principal Investigator)
Co-Investigators: Professor A.B. Amoa, Professor J. Vince, Mr. C. Aquame, Mr. J. Pamu and Mr. Nigani Willi. “Does successful universal salt iodization guarantee optimal iodine nutrition in mother and infant?”, K48, 000 (OHE)

2008 School Publications

Publications in Journals


Publications in Proceedings of Conferences


Kevau, J.H. New Directions for the School of Medicine & Health Sciences: Proceedings of PNG 44th Annual Medical Symposium, Rabaul, September, 2008


Temple, V.J. Status of HIV related food and nutrition research in PNG. In Proceedings on Consultation workshop on HIV Food and Nutrition in PNG. NDOH and Albion Street Centre Publication, Sydney and Port Moresby, 2008


Vince, J. MMED rural health programme: Starting to walk: Proceedings of PNG 44th Annual Medical Symposium, Rabaul, September, 2008

Presentations in Conferences, Seminars and Workshops

Dindi, M., Ireland, C., Harper, M-K., Bugni, T., Matainaho, T. Isolation of bioactive compounds from Exocarpus Latifolius. UPNG Science Conference, Port Moresby, November 2008


Kemung, H., Rai, P.P., Matainaho, T. Antimicrobial screening of medicinal plants from Kote in Morobe Province. UPNG Science Conference, Port Moresby, November 2008

Lauwo, J. A. K. Impact of HIV/AIDS- Stigma and discrimination on the access to VCT and other health services in selected populations of the National Capital District, Papua New Guinea, National Research Institute (NRI) Seminar, Waigani, June 2008

Moti, M., Vince, J.D. Dose IMCI make a difference? Med. Soc. PNG Symposium, September 2008

Noro, J., Barrows, L.R., Ireland, C.M., Matainaho, T., Bugni, T.S., Schmidt. Discovery of Tetrahydroxyxysqualene from Rhus taitensis with anti-tuberculosis activity. UPNG Science Conference, Port Moresby, November 2008


Rai, P. P. Traditional medicine and human health, presented at the launch of The National Policy on Traditional Medicine at Hideaway Hotel. Port Moresby, April 2008


Tefuarani, N. A National screening programme for heart diseases in children in Papua New Guinea. 12th Rwanda Medical Association and Rwanda Heart Foundation meeting, Kigali, Rwanda, 2008


Temple, V.J. Assessment of vitamin A and C-reactive protein in infants and their mothers attending paediatric clinics in Port Moresby. UPNG Science Conference, Port Moresby, November 2008

Temple, V. J. Assessment of thiamine status of boarding school students in National Capital District and Central Province, Papua New Guinea. UPNG Science Conference, Port Moresby, November 2008


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Authored and Edited Books


Reports (Grey Literature)

Tefurana, N. Operation Open Heart: July Visit: 2008

Lauwo, J.A.K. Impact of HIV/AIDS- stigma and discrimination on the access to VCT and other health services in selected populations of the National Capital District, Papua New Guinea, 2008

Consultancy Reports


Tefurana, N. Rawanda Paediatric Cardiac Screening: July Visit: 2008

Research Theses

Jeffrey Noror: Chemical investigation, isolation and structure elucidation of biologically active natural compounds from PNG: MMed.Sc. UPNG: (2008): Principal Supervisor Associate Professor Teatuloji Matainaho

Stanley Lothe: An analysis of antibacterial activity of Papua New Guinea marine sponges, Oceanapia sp., Coelocarteria singaporensis and Cymastella sp. BSc Honors: UPNG: (2008): Principal Supervisor Associate Professor Teatuloji Matainaho
Meysa Mai: Phytochemical screening and antibacterial studies on methanolic extracts of five PNG traditional medicinal plants: BSc Honors: UPNG: (2008): *Supervisors Associate Professor Teatulohi Matanaho and Dr. Prem P. Rai*

Rosemary Benjamin: Isolation of Phospholipase A₂ from PNG snake venoms: BSc Honors: UPNG: (2008): *Principal Supervisor Associate Professor Teatulohi Matanaho*

Uluk, T. The accuracy and reliability of a T-cell based assay to diagnose active and latent TB in HIV uninfected and HIV infected children in a hospital setting in PNG: M.Med Thesis: (2008?): *Supervisors Professor John Vince and Associate Professor Nakapi Tefuarani*

**Research Outcome**

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<th>SCHOOL OF MEDICINE &amp; HEALTH SCIENCES 2008 PUBLICATIONS</th>
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