IMR NIUS

Seasons Greetings & Happy Holidays

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NEWSLETTER OF THE PNG INSTITUTE OF MEDICAL RESEARCH

IMR to lead a World Bank funded countrywide health facility efficiency study

The PNG Institute of Medical Research (IMR) in collaboration with overseas collaborators will be conducting a countrywide 'efficiency' study of PNG health facilities.

The IMR's Population Health and Demography Unit (PHDU), in collaboration with the University of South Carolina, USA and the Nossal Institute for Global Health, Australia recently won a competitive tender to conduct this study.

Funded by the World Bank, this study will assess how efficiently health facilities, especially hospitals, use the resources at their disposal - financial, human and medical supplies among others, to deliver health care services.

It will compare the efficiency of government versus church run health facilities and will allow the impact of the recently introduced free healthcare policy to be properly assessed.

According to Nelly Saweri, an IMR Health Economist who will be leading the study, "An efficient health service is one that uses all the resources at its disposal to deliver as many needed services as is possible to a high standard and with minimal wastage."

"An inefficient health facility, on the other hand, is one where financial, human or medical resources are wasted and service provision is less than what it could be," she added.

This study will be IMR's first large scale health economics project and will also be the first project for PHDU's recently established 'Health Systems and Health Economics' research section.

Dr Justin Pulford, Head of PHDU said this is a really exciting study as the findings will be of interest to a wide audience and will directly inform policy and planning to improve health care service delivery in PNG.

"I am especially excited for the IMR as this is the start of what I hope will be an ongoing health economics research program," said Dr Pulford

"It is also an excellent opportunity for Ms Saweri to apply her economics training and to further develop as a leading health economist in PNG."

The study will involve all provincial level and higher hospitals in the country as well as district hospitals in 11 provinces.

The one-year study will commence in January 2015 with final results to be reported in December 2015.

Pictured from left to right: Dr William Pomat (Deputy Director Science), Dr Justin Pulford (Head of Population Health and Demography Unit),Nelly Saweri, and Representatives from the World Bank.

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The Papua New Guinea Institute of Medical Research (IMR) is a world class research facility looking at ways to improve the health of the people of Papua New Guinea. IMR's research targets malaria, pneumonia, filariasis,respiratory disease, sexual health, malnutrition and much more.

Moresby

The Institute was established in 1968 as a statutory body and is governed by a 14-member council that reports to the Minister for Health and HIV/AIDS.

Vist us www.pngimr.org.pg

Director's Message

Professor Peter Siba

Hello everyone!
Welcome to our combined Newsletter for the Third and Fourth Quarter of 2014.

Symposium

We have successfully co-hosted the 50th Medical Symposium with our friends from the Eastern Highlands Provincial Health Authority.
The Symposium attracted over 500 health professionals, who came from all over PNG and some overseas-based to attend the event.
The event was truly significant for the health sector in PNG. As the theme stated 'Achievements of the past 50 years and future challengers, the symposium created an avenue where key health issues were presented and discussed at great lengths. The three-day event allowed health professionals to listen and as well present on key health issues affecting the health sector. This included presentations on the Medical Society of PNG, Health Policies and Public Health, Medical Education, Medical Research and the Medical Journal, Sexual and Reproductive Health, Respiratory Diseases, Malaria and Non-Communicable Diseases.
It was a postmortem of the health sector over the last 50 years. The three-day event also witnessed the appointment of life members into the PNG Medical Society, awards being given to outstanding presenters. The end of the event saw a set of resolutions and recommendations being created and presented to the National Department of Health and the Government to consider.
The next symposium will be held in Port Moresby and will be hosted by the National Female Doctors' Association.

Projects

At the IMR, we are also slowly winding down two of our major projects - the Malaria Control Program and the Partnership in Health Project.
The Round Eight Malaria Control Program was set to end in October but after a successful talks with Global Fund's main recipient in PNG - PSI, the project has been awarded an extension of three months, with the officially closing of the Round Eight Global Funded MalCon Project in March next year.
For those who may not be familiar with the MalCon Project at IMR, the project is the sole independent evaluator of the National Malaria Program. Over the last five years, the project was able to successfully evaluate the NMP and from evident-based research was able to inform the NDoH, the custodian of NMP and policy makers of the successful results of NMP - the decreased the burden of malaria in PNG from 18 per cent in 2009 to 1 per cent in 2014. This is one of our biggest achievements at the Institute.
The MalCon project's performance over the last five years has been outstanding and I would like to congratulate the team on a job well done.

For the PiH Project, its main programs will be folded up in December. Funded by Exxon Mobile at an estimated cost of K12 million, the project was to assess the impact of LNG project on the overall health and wellbeing of the population living within the project's impacted areas - West Hiri and Komo/Hides. The project was able to deliver its sets of targets and consequently also generated a lot of health data not only for the project developer but also the health department. The PiHP has also been outstanding in gathering much needed health data for the population living in the project-impacted areas of the PNGLNG Project - West Hiri and Komo/Hides. A lot of health data were derived from this project such as TB, Non-communicable diseases, Sexual and Reproductive Health, Demographic surveillance, Nutrition among other. These data will greatly assist the project developer in its community development and socio-economic programs. Consequently data from this project will also assist our National Department of Health. The project had several sub-research programs running - but all will cease in December except for the integrated Health and Demographic Surveillance System will continue.
The management is currently executing its exit plan for both projects especially with project staff to allow for a smooth exist once both project ends.
Meanwhile, other sections of PNGIMR in all our other branches will continue to carry out effective research of different diseases and find ways to better the health of our fellow Papua New Guineans which is the Institute's primary goal.
On behalf of the PNGIMR Management and staff, I would like to sincerely thank our collaborators, sponsors, partners and friends for the great collaboration during this year and we hope this friendship carries on into the New Year.
Until then, Merry Christmas and May the goodwill of the season be with you all and your families.

Cheers,

Prof Peter Siba,
Director, PNGIMR

FROM 18% - <1%

Mr Samson Akunaii (Deputy Director Corporate Affairs & Support Services) and Dr Justin Pulford (Head of Population Health and Demography Unit), cutting a cake to officially end the Malaria Control Project (MalCon) in PNGIMR, Goroka. The MalCon Project is an archievement as because of it, PNG has seen the decrease on the burden of Malaria from 18% to 1% since 2009 to 2014. We congradulate the MalCon team for their dedicated efforts.

Its offical! Malaria burden in Papaua New Guinea has significantly declined from 18 per cent in 2009 to less than 1 per cent in 2014 according to findings from our study.

This is what our Malaria Control Project team has found out after conducting extensive evaluations on the National Malaria Control Progam in the country. The project was funded by the Global Fund to primarily evaluate the overall performance of the NMCP in PNG. And to do thisThe five-year evaluation covered all 22 provinces of PNG and to clearly evaluate and see the trend of malaria and the NMCP performances, over 200 000 questionaires were conducted, over 50,000 blood slides where collected and checked twice by lab technicians, include conducting random household surveys (#) and health facility survey (#) in all 22 provinces of PNG. In doing so, over 50,000 blood slides samples were collected over om evidence-based research that was conducted the Malaria Control Project (Mal Con) team at IMR. The Mal Con team evaluated the overall National Malaria Control Program through funding from Global Fund over a period of five years (2009-2014) following the Nation-wide distribution of treated mosquito nets. The evaluation consists of surveys - household, health facility; sentinental site surveillances that were conducted in all 22 provinces of PNG.

Sinafa Robby wins award

Sinafa presenting his research findings at the 50th Annual Medical Symposium in Goroka in September at the University of Goroka. Sinafa won the Deborah Lehmann Award for best young research scientist with the best research.

Top and bottom: Our two Honours students, Naomi Vincent & Michelle Katusele presenting their papers as poster and oral presentations during the Medical Symposium.

Senior Lab Technican clocking 30 years at IMR

Thirty years on and he is still working in the same laboratory, collecting samples, isolating and analysing them for various infectious bugs but nevertheless enjoying every minute of his work. Sauli Bebes, 45, is a Senior Laboratory Technician at the Virology Lab here in Goroka. But his journey at IMR began in 16 July, 1984 at just 15 years of age and with a six-grade education. With no basic laboratory skills and not even a single clue about medical research, Sauli started out his journey as a medical researcher.

By Geraldine Vilakiva

In July, this year, he clocked 30 years at the Institute.

Sauli never thought he would last this long at the Institute and smiled as he gathered his recollection of his first day at work.

"There was an Australian by the name of Andrew Collins or Guligulipatole in Gahuku dialect, a field research assistant who lived in my village – Masilakauha – Masi as it is commonly called, just one to two miles out of Goroka town. He was working with Dr Michael Alpers, a former Director of IMR on some research project.

"Andrew approached me and asked if I wanted to work with IMR. That time, the Institute was a very small organisation and like most people, I didn't know what sort of work it did."

Andrew later took him to the Institute and introduced him to Ray Sparks – another Australian and the Laboratory Manager at that time. As Sauli stepped into Ray's office, Ray in all seriousness asked him in Tok Pisin 'yu laik wok ah!" (Do you want to work?).

"The only expatriate I knew was Andrew and Ray asking me with a serious tone made me so nervous to answer him, even to look at him. I put my head down and in my mind, I kept thinking, why did Guligulipatole (Andrew's Tokples name) bring me here and to do what!"

"I soon realised that Ray was just being polite in his question, so I answered him and that began my employment at IMR."

Ray then brought him into the unknown world (Virology Laboratory) and introduced him to staff working in the lab at that time. (Monica Sungu, Tony Lupiwa, Rita Palik, Mark Menz and the section head, Dr Peter Philips, the Virologist.

This unveiled a whole new world for him, and triggered his journey into virology and laboratory work.

Sauli began working in the Asaro Surveillance Unit collecting samples from children who had coughs and processing them for influenza A, influenza B and Adeno virus. He worked as an assistant field researcher and lab technician. Back then there were less staff so he got to take on many assisting roles too, both in the field and lab.

"I would work from as early as 6am to 11pm in the night sometimes when I went out in the field with my colleagues and returned back to the lab with the specimens, I would immediately process the specimens and grow all the cell lines used for growing and infecting the cell lines with the processed specimens from the field"

"I never knew much about laboratory work, like what to do, how to do it effectively and efficiently, so I began reading books in the small library we had that time. I read all sorts of books and journals that I could find. Reading greatly helped me broaden my understanding of medical research and improved my lab skills too. The library became my training ground."

Sauli clocks 30 years at IMR

"I also learnt from other helpful staff in the lab too – my bosses and my colleagues. I learnt how to grow all kinds of cells, prepare media food for cells and virus to eat and grow, how to use a microscope, and conduct various lab tests using the Golden Standard Methods (Cell Culture Methods) such as virus isolation for immunoflorescent assays test (IFA) for detecting Influenza type A, influenza type B and Hemagglutination inhibition (HI) tests of influenza A using guinea pig blood.

After the ARI program ended in 1991, Sauli shifted to another project – the Polio Eradication Program contracted by the World Health Organisation (WHO) to PNGIMR which he says was one of the biggest and busiest projects he ever worked on.

"He says, the techniques used for isolation and identification test done in the lab for polio viruses were similar to the previous ARI project but many changes were made by World Health Organisation in the past 16 years while working on polio eradication programme and for that reason I have to travel out of the country for hand on trainings from the specialist laboratories overseas. I continued with the new project by processing and analysing all the stool samples collected from sick children admitted to the children's ward in hospitals all over PNG and suspected of having Acute Flaccid Paralysis (AFP) and stool samples collected from Meningitis cases at the Goroka Base Hospital when the meningitis study was integrated with the polio surveillance study by the World Health Organisation.

When samples come in, I start to work on them immediately by doing viral culture and then on to studying these bugs under the microscope and also performing other lab tests to see if the samples are positive for Polio viruses. It takes about two-weeks to complete the whole process of a single sample. All confirmed positive samples for Polio and other entero viruses are later packed and sent to our reference lab in Melbourne for further characterization to identify whether the strains are vaccine or wild strains, or other related viruses.

"Sometimes, a process would go wrong with fungal or bacterial contamination and so I would have to go back and redo the whole process again - manually. It was a lot of work but for me it was still enjoyable as I also got to learn new things."

The project processed more than 3000 samples when the Meningitis study was integrated with the AFP surveillance study and led to the uplifting of the Virology lab status to being the country's National Polio Surveillance Laboratory.

The AFP surveillance project came to an end in 2005 when Papua New Guinea was certified Polio free by International Certifying Committees (ICC) and now he has moved on to Rotavirus Surveillance study for children admitted with diarrhoea at the paediatric ward in Goroka Base Hospital in collaboration with World Health Organisation.

During his free breaks, Sauli was fully committed to upgrading his education through correspondence at the College of Distant Learning (CODE) centre in Goroka.

"With the management's blessing under Prof Michael P. Alpers, I was enrolled into Grade 7 at CODE that year in 1990. Because my focus was more into my work, I only attended to my CODE classes during my free time – that's during lunch hour or over the weekends when I'm not working."

Although that slowed his completion of his education, nevertheless it never stopped him from completing it.

In 2013 and after 23 years, Sauli completed his Grade 12 last year with flying colours.

The years have also taught him very significant lessons in life but one that stood out for him was "time is of the essence in everything but should not be used as a measurement against one's goals in life".

Humbleness and commitment are his two traits for his achievement and success.

"They have allowed me to not only last this long at IMR but also paved the way for my career growth," and also taking up most of the responsibilities in the lab for eradicating poliomyelitis in PNG, which will go down in history of generations to come, he says.

Being the longest and oldest among some of his colleagues, Sauli says it has its moments - good and bad but regardless, his passion for his work is all that matters to him.

Studying virus and later linking them to diseases and helping to find solutions to improve the health of Papua New Guineans is his passion.

"I know that my contribution to medical research at IMR is my purpose in life and I'm glad that I am fulfilling it."

His work has also allowed him to travel to places like China, Japan, Hong Kong, Singapore, Malaysia, South Korea and Australia to attend conferences, meetings and training workshops which were memorable and sometimes funny too.

Some might think three decades of working is enough to call it a day, but Sauli thinks otherwise and would like to add another decade of service under his belt before he starts considering retirement.

He hopes to further his education and become a Graduate Scientific Officer – something he is confident he could achieve, but does not think it will become a reality.

This is because he feels that the training focus at the Institute has changed and is now more focused at the young university graduates.

He thanks God for his continued blessings; his immediate family for their love and support, his mentors turned close friends for their advice and finally, the management staff, namely Prof Peter M. Siba (Director), Dr Willie S. Pomat (Deputy Director for Science) and Samson S. Akunaii (Deputy Director for CASS), The former Directors (Prof John Reeder and Prof Michael Alpers), other senior staff members of PNGIMR and Prof Andrew Collins (Guligulipatole) at the UNSW for having the faith in him and for allowing him to last this long in the place he calls home and doing what he loves best.

For more information about the 50th Medical Symposium and many of our interesting studies, visit our website www.pngimr.org.pg or email us directly at info@pngimr.org.pg

Scientist wins Global Award

Dr Laman presenting his research during the 50th Annual Medical Symposium. This presentation won him the Saweri Award for best clinical research paper.

A senior scientist from our Vector Borne Disease Unit – based in our Madang branch has been awarded a prestigious global scientific award by the Third World Academy of Science (TWAS).

Dr Moses Laman's historic award makes him the first scientist from the Pacific region including Papua New Guinea to win the award from TWAS.

His award was based on his outstanding publication track record.

TWAS is an international science academy founded by Nobel Laureate Professor Abdus Salam in 1983 and works to advance science in the developing world.

Every year, TWAS bestows only five Young Affiliate Awards to outstanding young scientists in all fields of science in developing countries in each region of the world.

These regions include Arab, Sub-Saharan Africa, Latin America and the Caribbean, Central and South Asia, and East Southeast Asia-Pacific.

Eligible scientific fields include engineering sciences, astronomy, earth sciences, agricultural sciences, cell and molecular sciences, chemical sciences, physics, mathematical sciences, social and economic sciences and medical sciences.

Since many outstanding third world country scientists in all scientific fields compete for the same award, it makes it almost impossible for smaller developing countries in the Pacific to compete against scientifically advanced third world countries like China and India.

Due to the high standard of eligibility and requirement for this award, no scientist from the Pacific has been able to accomplish this achievement since the TWAS inception.

Regardless, Dr Laman's outstanding and strong publication track record of over 30 scientific publications – 15 of which as first-author and 12 as second-author since joining IMR in 2007, enabled his award.

When commenting on his achievement, he says, "i am not clever, many people have helped me. But it's important to treat those others may consider as unimportant, with respect. If your motives are right, you'll realise that these 'unimportant' people will be the main ones helping you to accomplish what others may think is impossible. Secondly, there's no secret, I work hard and never give up easily, probably because of my difficult background. I grew up as a poor village boy and know what it means to have nothing. But if you stay focused, try your best to do what you know is right and live each day intentionally, rewards will follow you."

He thanked the management of PNGIMR, his mentors, family and also gave credit to his team of simple IMR employees in Madang who have always taken ownership of his projects, and have faithfully worked with him over the last 6 years, running multiple clinical studies often under challenging field conditions.

Dr Laman, 35, currently holds Bachelor's Degrees in Medical Science, Medicine, a Masters in Medical Science and is soon to receive his doctorate in Medicine from the University of Western Australia in December, this year.

In an unrelated event, Dr Laman has also won a travel grant offered by the Australian Academy of Science and the Royal Society to attend the First Commonwealth Science conference to be held in Bangalore, India, in November to present the findings of his PhD research.

He recently also took out the Adolf Saweri Award, for the best clinical research paper presented at the 50th Annual Medical Symposium in Goroka in September.

IMR visits Bena BenaSecondary School

Staff of the Institute held a successful information session with teachers of the Bena Bena Secondary School following a request from the school.

This information session was held in July at the school as part of the teachers' in-service program.

The session generally discussed the work of the Institute.

It helped the teachers - totaling more than 20 to improve their understanding of the work IMR does and its significance to health in Papua New Guinea.

At the end of the session, the team allowed for questions – which were quite many but also allowed for further interaction between the Teachers and IMR staff.

Many considered the IMR talk as 'refreshing' and have already made their intentions known of a planned school excursion to the Institute soon; this time involving their students.

Teachers and staff of the IMR listening attentively to Gerard Saleu's dictation.

Scholar Hasu and Mary Dreyam of IMR ready to hand out and explain brochures and posters to teachers.

A researcher's passion to improve health through research

Janet Gare is a Senior Scientific Officer (SSO) at the IMR's Sexual and Reproductive Health Unit's HIV/STI Laboratory. She has redefined new boundaries for women researchers at the Institute by being the first national woman researcher to pursuing a doctorate degree at the Monash University in Melbourne, Australia. Janet is an inspiration to researchers and non-researchers alike.

From Okapa, in the Ungai-Bena District, Janet's career as a medical researcher took flight in 2002 when she joined IMR after completing a degree in biology at the University of Papua New Guinea. Since then, Janet has climbed ranks from a Graduate Scientific Officer to become SSO in the HIV/STI Laboratory at the Institute's Goroka branch. She also completed a Master's degree in Infection Biology/Epidemiology in 2008 from the University of Basel, Switzerland. As much as to think these were her biggest achievements, they were not.

For her, it was the opportunity of working at the Institute.

"For me it would be the 12 years dedicated to research at the IMR after graduating from UPNG. As a child growing up, I was always fascinated watching scientists wearing white gowns and working with a pipette – it has always thrilled me since childhood. Of course, now that I am a laboratory research scientist, I like getting into my white lab gown and run tests on specimens collected from patients to determine the presence of disease causing pathogens."

"The job gets exciting when you have to present your findings at conferences and contribute to the body of knowledge in the medical science. Most importantly, if the findings are significant to public health, they are then translated to health policies. I also love my job as it allows me to meet and interact with people at the community level."

Doing a PhD never really hit a nerve back then but when it became imminent in 2011, her biggest challenge was the decision to leave her seven-month old infant to pursue her studies.

"I believe God gives women extra inner strength and wisdom to handle any situation. My son was seven- months when I left to pursue my PhD in 2011. The only time I get to see him and spend time with him is during my field trips and holidays in Goroka. I am thankful to my family for providing extra super care to my son. He is now three years old and has been the best part of my life. He is not a burden rather a blessing that drives me to excel in my study and work."

Janet's PhD project is about HIV drug resistance in PNG. Treating HIV infection with antiretroviral drugs has immensely reduced HIV-related morbidity and mortality globally. In order for the medication to work effectively, people living with HIV (PLWH) and are taking ART must adhere completely to their treatment. Otherwise, non-adherence and sub-optimal treatment encourages the development of drug resistance which may lead to treatment failure. Antiretroviral therapy (ART) was introduced in the PNG health system 6 years ago and there are more than 14,000 people currently on ART in the country.

"My research project aims to measure the levels of drug resistance among PLWH who are on ART (drug resistance acquired whilst on ART due to non-adherence or sub-optimal treatment) andalso those who are not yet on ART (they can be infected with a resistant strain of virus that can reduce treatment efficacy). In addition, we wanted to investigate social factors that affect PLWH not to adhere to their treatment."

"Already findings from this study project have reported low levels of drug resistance which is a good indication that ART is working effectively in the PNG population. However, we also found that a higher number of patients are not adhering to their treatment and were failing therapy. The evidence for patients' non adherence emphasises the need for continued education on treatment

This study is of significance as its findings will guide informed decisions on the delivery of ART programs and thus ensure the continued efficacy of ART in PNG.

Training Nius

Molecular Biology Workshop

Following the success of this workshop in 2012, it was held again at our Goroka branch from 8-12 September where 26 staff participated.

This workshop is specially to upscale our Graduate Scientific Officers knowledge and skills in Molecular Biology.

It is vital for our laboratory scientists to know about Molecular Biology since it is an essence to laboratory research – which half of our research work is centred around.

The workshop was jointly hosted by the Institute and Walter & Eliza Hall Institute, Melbourne and was facilitated by mostly Senior Research Fellows working at IMR and a guest facilitator from WEHI.

The five day workshop covered basic molecular biology topics, ranging from theoretical basis of polymerase chain reaction to bioinformatics and more applied molecular biology tools.

HIV/STI Laboratory staff wins STPH Scholarship

Diana Timbi, a Graduate Scientific Officer with our HIV/STI Lab in Goroka is the successful recipient of the 2014 Swiss Tropical and Public Health Scholarship.

Diane, who left for Switzerland last month was awarded a two-year Post Graduate Scholarship which will see her undertake a Masters in Science at the University of Basel, Switzerland.

Diane's acceptance now brings to total five IMR staff that had completed Masters in Science through the scholarship. Prior to Diane, Lincoln Timinao, from the Malaria Parasitology Lab completed his studies in 2013 and graduated with exceptional results.

This training opportunity has spanned over five years and was the result of strong research collaboration between IMR and Swiss Tropical Health Institute.

The program is supported and run by the Swiss Tropical and Public Health Institute.

Honours students presents at the Medical Symposium

Two of the three honours students under the PNGIMR / UPNG Training Program presented their research papers at the 50th Medical Symposium in Goroka. Naomi Vincent and Michelle Katusele's papers were presented as poster and oral presentations at the main symposium and the Biomedical and Social Science speciality meeting respectively. These were part of their assessments too.

A researcher's passion to improve health through research: Janet's story cont.

adherence to minimise development of drug resistance."

After completing her studies, Janet would like to remain in the HIV research with more focus on clinical research, "and maybe in the near future, opt out of research for a season to get a medical degree to compliment my research skills and then continue," she says

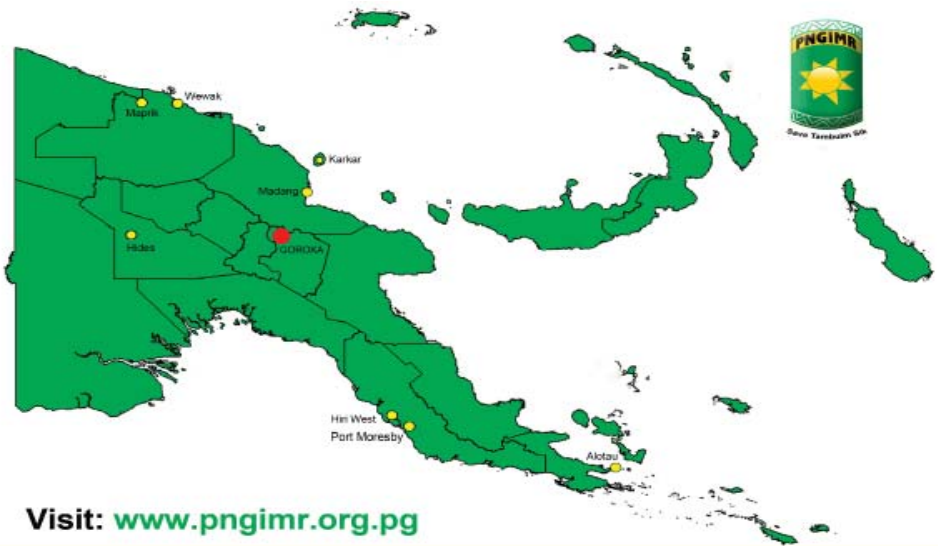
Her advice to women researchers and young aspiring researchers is "money may not be as attractive in research all across but if you have the passion for research and a heart to serve your country, nothing will stop you. Pursue with passion until you get to the top and be a leader in the research field of your expertise and amongst the male dominated positions."

Janet is currently studying at the Monsah University but is using the office and lab facilities at the Burnet Institue to conduct her experiements. She is grateful to the IMR management for allowing her the opportunity to study and to those who assisted her in data collection; nurses, medical doctors, lab scientists and the study participants who consented to participate in my study.

My sincere gratitude to the Australian Government to fund my PhD program and also to the National AIDS Council Secretariat-PNG for funding my PhD project."

Training Nius is compiled by Dickson Kuvi (Training Officer) and John Yogiyo (Assistant Training Officer). Phone: +675-531 4259.

OUR LOCATIONS



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