



## IMR mourns Dr Saweri



*Dr Adolf Saweri in May 2012 at IMR Goroka.*

Late Dr Adolf Saweri was a very dedicated and committed medical officer, researcher, academic, administrator and colleague.

Much loved former IMR Council Chairman Dr Adolf Saweri passed away on 11 November 2012.

Late Dr Saweri was the longest serving Chairman of the IMR Council, starting in 1980 and retiring in May 2012.

He worked with the institute at a time of great change for PNG and for medical research.

Dr Saweri's research and academic background, especially in medicine and biomedical sciences, ensured he could expertly guide his colleagues.

He provided invaluable assistance to IMR both as a leading research institution and to individual scientists seeking excellence in their chosen fields.

IMR staff members in Goroka gathered to honour Dr Saweri in the auditorium named for him and where he had so recently been lauded for his years of service to IMR.

Staff took a minute of silence to honour Dr Saweri. There was an address by IMR Deputy Director Samson Akunaii and prayers, hymns and a bible reading.

Late Dr Adolf Saweri was a very dedicated and committed medical officer, researcher, academic, administrator and colleague.

We will honour his memory by continuing the work of IMR along the path he has lit so brightly.

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# Director's Message

This is the final issue for the year and as always, I would like to congratulate the senior management and all my staff at all branches for another successful year. This year has been very busy on both the research and corporate affairs front with new research studies and infrastructure developments. The recent addition of Alotau as the fourth branch of the Institute is a milestone. Although the new branch will start to function by mid next year, it will be responsible for the current research on tuberculosis, malaria and maternal and child health. However, we hope to also set up more new research studies there as well.

The opening of the new Partnership in Health Laboratory in Port Moresby will greatly assist most of our studies next year. The new laboratories located at the University of Papua New Guinea's Medical School will not only assist studies at IMR but also allow Post Graduate Students of the Medical School and the staff to use its facilities as well. This is also an opportunity to have the IMR's presence at the school.

One year on and we are still hopeful for full investigations into our five missing scientists to be completed and bring to light the truth about their disappearance. We hope the

**This year has been very busy on both the research and corporate affairs front with new research studies and infrastructure developments.**



**Professor Peter Siba**

government's promise to reopen the case will eventuate next year.

I also want to pay tribute to the Institute's longest serving Council Chairman, Late Dr Adolf Saweri, who passed away in November. His professional guidance and chairmanship will always be remembered.

Lastly, thank you to all staff for your support in marketing the Institute this year through the very successful Open Days. Let us continue to promote IMR in the years to come.

With that, I wish you all a fun and enjoyable Christmas and New Year.

Thank you.

## Pneumonia: the forgotten killer

**Preventable and treatable, pneumonia is the main reason why children in Papua New Guinea and around the world enter hospital or die before they turn five.**

"Around 500,000 children die each year from pneumonia, mostly in developing countries such as PNG," said Dr William Pomat, head of Infection and Immunity at the PNG Institute of Medical Research.

"To reduce the number of deaths, Papua New Guinea plans to introduce pneumococcal vaccines in 2014, a move that will have a significant effect on our children's health," he said.

The IMR study is looking at two vaccines, Synflorix<sup>TM</sup> and Prevenar13. Both vaccines can prevent pneumonia and meningitis, but because most countries use Prevenar13, production may not meet demand.

Making sure both vaccines work equally well will give the National Department of Health the option of using Synflorix if supplies of Prevenar13 run short.

"Our study of 200 children will inform the National Department of Health whether the two vaccines are safe, protect



*Wearing blue and white to mark World Pneumonia Day, IMR staff share a cake with the children's ward at Goroka General Hospital.*

children and more importantly are similar and can be exchanged," he said.

Dr Pomat said the study is being conducted in Goroka and the surrounding Asaro Valley, with families who agree to enrol their youngsters for this important work. It is progressing well, with 137 children already enrolled, vaccinated and being followed up regularly, with good results.

"To conduct a study, we need community support as our regular visits mean we

become part of their lives. The support of staff at Goroka General Hospital is equally important.

"We expect Prevenar13 to be rolled out in 2014 with funding subsidy from Global Alliance for Vaccine and Immunization (GAVI) through the Gates Foundation.

Dr Pomat noted that cost is a significant barrier to implementation for many developing countries and will be for PNG in 2019 when GAVI subsidy expires.

"This is cutting edge work and we are proud to be involved with this study that will save lives, he said.

**"To reduce the number of deaths, Papua New Guinea plans to introduce pneumococcal vaccines in 2014"**

# 2012 OPEN DAY HIGHLIGHTS

Research for a Healthy PNG was the theme for our Open Days held in Goroka on 5 October and Madang on 11 October. The events provide the chance for members of the public living in the two towns to learn more about our research work. Hundreds of people, including school students, parents, public servants, medical staff and villagers visited the various research stalls to learn more about the diseases that are affecting the

health of Papua New Guineans as well as the research that IMR is doing to combat these diseases. All five research units presented their work, using brochures, flyers, posters and even small movies to get the theme for the day across to the public. NBC radio stations in Goroka and Madang provided live coverage of the events.



Talking with the media at the Madang Open Day.



Listen carefully: part of the crowd at a presentation by Environmental and Emerging Disease Unit staff, Goroka.



Dancers entertain the crowds at Bates Oval, Madang.



Getting ready to talk to the media in Goroka.



Open for business: information stall at Bates Oval, Madang.



Students from Kama Adventist Primary read a PIH brochure.

# How the clinical trial works

IMR is running a study focusing on uncomplicated malaria that is looking at a new drug combination for malaria treatment during pregnancy (Intermittent Pregnancy Treatment program)

The IMR team includes seven nursing officers and community health workers, plus doctors, microscopists and two drivers.

Most doctors have a clinical background, many were drawn to research to learn more about the interventions they provide in their consulting rooms.

Before a study begins, general community awareness campaigns are conducted in the area about the trial and IMR's work.

Villagers are generally supportive of the work and understand there may be some inconveniences in terms of being available for appointments -- as the communities are coastal, some patients make their journey by canoe.

"We build relationships with all of the people, not just the enrolled patients," said Dr John Benjamin, a doctor with the study at Alexishafen.

"We also have a good relationship with the staff of the Alexishafen Hospital. If their vehicle is out and they have a serious case, we can help them, and they help us when we require a few beds for research purposes," he said.

Patients are invited to join the study if they have fever and positive blood slides for malaria.

However anyone who is very ill, who is fitting or convulsing, or has signs of other underlying medical issues, will be excluded from the study and immediately referred for specialised care at Modilon hospital.

Once the study has been fully explained and consent given, they are assessed by the IMR team and data is recorded and samples taken.

Malaria treatments are then prescribed, and dates booked for follow up appointments.

Dr Benjamin explained that these drug studies are generally short term, lasting three to nine months for small studies and one to three years for larger studies. Generally participants are day patients, sometimes an overnight stay is required. "Our patient sample size for small studies is usually around 50 for one drug, for example, trialling new against existing drugs. "Some studies have as few as 30 participants while others have up to 1200.

"Some people are hesitant or fearful, another factor that could limit patient eligibility is where they live – if a child lives up in the mountains, we can't follow up with them," he said.

"Any issues are discussed thoroughly before enrolment in the study goes ahead," he said.

## Farewell to IT man



Deputy Director Samson Akunaii (right) presents Kuzah (Kuks) Iva with farewell gifts.

IMR's long serving IT officer, Kuzah Iva, was farewelled by the office on 6 October 2012.

After serving for nearly 15 years, Kuks has sought fresh challenges outside IMR.

Kuks joined IMR in January 1998 in Madang, later moving to Goroka where he worked on installing the local area network.

Deputy Director Samson Akunaii farewelled Kuks and thanked him for his loyalty and contributions over the years.

## Think pink for breast cancer awareness

IMR saw pink in October, when the Healthy Women Healthy PNG group held its annual Pink morning tea to raise funds for breast cancer awareness.

On a sunny day, in the beautiful gardens on site at Goroka, the gaily decorated pink cupcakes, lamingtons and other sweet treats did not take long to be sold.

Healthy Women Healthy PNG is an IMR women's group that works to empower women in Goroka and PNG to raise their life expectancy.

Raising money to support women's health and cancer relief activities is part of their brief and funds from this event go to support the Well Woman's Clinic at Goroka General Hospital.

The morning tea is held in October to mark breast cancer awareness month, which serves to remind women to carry out self-checks or visit their nurse or doctor for a full checkup.

In November, the Healthy Women Healthy PNG group launched the Strive for Five campaign at a women's



Inspecting the cakes at the Pink Morning Tea are Sarah Javati, Pamela Toliman, Cynthea Leahy and Celestine Aho.

evening at the Bird of Paradise Hotel in Goroka.

Strive for Five targets cervical cancer, encouraging women to have a cervical examination and to ask four others to do the same – hence 'strive for five'.

Cervical cancer is the leading cause of cancer in PNG women, killing around 1500 each year.

Regular screening is an effective method of detecting changes in the cervix that may lead to cancer – treatment in the early stages saves lives.

# Clinic in a car



*In Bemlon village in Madang Province, a young study participant is watched by his mother as Nurse Gumul Yadi gathers study data in the IMR car.*

The IMR vehicle jolts down the road, turning along a track and pulling to a stop in Riwo (Mal Mal), a neat, green, waterside village in Madang Province.

IMR Nurse Gumul Yadi gets out and moves to the back of the 10 seater Land Cruiser, opening the doors and pulling forward a large plastic box containing medical equipment she prepared earlier that day at the Alexishafen IMR Clinic.

Several villagers greet Nurse Yadi and driver Michael Bunag.

Then along come young Peter\* and his mother, the reason for today's visit by IMR.

Peter, along with 1200 youngsters in Madang Province, has been taking part in a study to determine which malaria treatments are the most effective.

The study compares two types of treatments, Coartem and Arco, both combination drugs. Coartem is a combination of artemether and lumefantrine; Arco is a combination of artemisinin and naphthoquine.

Clinical trials such as this require a rigorous process that began when Peter's mother took him to the hospital in Alexishafen seeking medical treatment,

and was invited to enrol him in the study that could change lives in the future for PNG.

It has involved several checkup visits by Nurse Yadi, on Days 0, 1, 2, 3, 7, 14, 28 and 42. Most checkups take place in the clinic, while some, such as today's visit, are in the participant's village.

She checks his pulse and takes blood samples, asking a set of standard questions, such as whether the child has had fever or a cough.

Medication is provided along with a drink of either milk (for Coartem) or water (for Arco) to help it go down.

Today, Nurse Yadi is recording the final data for Peter as he sits in the back of the IMR car with his mum.

To mark the end of the study for Peter, she presents him with an insecticide treated mosquito net.

Then nurse and driver climb back into the car and head to another village, where three-year-old Luke and his mother are waiting for a visit from the clinic in a car.

*\*Real names are not used for study participants for privacy reasons.*

## Testing new drugs for old problems

**Combination drugs are becoming increasingly respected for malaria treatment, as one drug on its own can quickly become resistant.**

First it was colonial era kiaps drinking gin and tonic for the quinine, then chloroquine became the drug of choice for treating malaria.

But malaria-carrying mosquitoes are highly adaptable, and over time, the parasites they carry and deposit in humans have become resistant to some of the earlier malaria treatments. "The old medications are still good, but they are not as effective as they used to be," said Dr John Benjamin, from IMR's Sek Drug Study Clinic.

The drug combination artemether-lumefantrine is standard treatment for uncomplicated malaria in many countries. It is usually sold under the brand name Coartem and is more expensive than similar treatments, so Mala-1 was developed in India to meet the need.

"This drug is now the first line of treatment in PNG," Dr Benjamin said. Combination drugs are becoming increasingly respected for malaria treatment, as one drug on its own can quickly become resistant.

Arco is another combination drug for use against malaria that is being trialled in PNG as part of the Drug Standard Treatment trial.

Study results will assist the National Department of Health to select suitable drugs for future treatment.

"We're aiming to have reliable treatment on standby for the country should we be unable to afford a medicine and we face resistance from the current treatment," Dr Benjamin said.



*The study involves comparing two types of malaria treatments, Arco and Coartem.*

# Early treatment saves HIV positive lives

A simple whiteboard will make a difference for clinical staff providing treatment and care to HIV positive people at Goroka General Hospital.

Donated to the team by the IMR's HIV Co-infection Study, the whiteboard will assist clinical staff providing education and awareness to HIV positive people, their families and supporters, said Pamela Toliman, scientific officer with the IMR Sexual and Reproductive Health Unit in Goroka.

"Education and counselling of HIV positive people and their supporters is an important prerequisite for commencement of antiretroviral therapy (ART), Ms Toliman said.

"Education is vital, but simple educational aids such as this whiteboard tend to be lacking," she said.

"Early diagnosis is the key to a healthy life for HIV positive people and the earlier you know you are infected, the sooner you can start ART, particularly before the onset of AIDS-related illnesses," she explained.

"PNG's HIV management guidelines say ART should be commenced when a person's CD4 cell count falls below 350," she said. A CD4 count is a measure of how strong the immune system is.

"However, little is known about the health profiles of HIV positive people in PNG, particularly those who are newly diagnosed and yet to start on ART.

"We find that late presentation is a barrier to effective treatment. ART is a lifelong treatment and supporters and



*Medical ward and Michael Alpers Clinic staff with IMR's Pamela Toliman and the new whiteboard at Goroka General Hospital.*

guardians also need to understand that people who are HIV positive must take special care of their health.

"Respiratory infections are a common cause of death among HIV positive people. In 2010-11, we targeted two public hospitals with high HIV caseloads - Goroka General Hospital and Port Moresby General Hospital, inviting HIV positive people with respiratory disease to join our study.

"Ninety-three participants provided sputum and blood samples for analysis and we asked standard questions about their health, background and daily life.

"We found that those in Goroka were more likely to have a lower CD4 cell count than those in Port Moresby. Significantly

more participants were immunologically eligible for ART in Goroka (65.5%) than in Port Moresby (34.5%).

"A large proportion of participants were diagnosed late in HIV disease and therefore could not reap the full benefits of early commencement on ART.

"Recruitment on the study began in 2010 and has now closed, although data collection and analysis will continue. This is just a little gift in appreciation of the work so far.

"We must investigate further the barriers preventing early diagnosis to improve health outcomes for HIV positive people," Ms Toliman said.

## Justice in sight for missing five

The management of the PNG Institute of Medical Research has welcomed the statement by Police Minister Nixon Duban to parliament in November to reopen the investigations into the disappearance of the five IMR scientists.

Deputy Director for Corporate Affairs and Support Services, Samson Akunaii, says the news comes as a relief for both the Institute and the families of the five scientists.

"It is a positive gesture by Minister

Duban and we thank him for his wisdom in both reopening and financing the investigation," Mr Akunaii said.

"This welcome news will relieve the Institute and the families of the missing five after months of waiting."

"We hope that this reopened investigation will be provided with adequate resources for all relevant government agencies to fully conduct their work," he said.

The five scientists were doing government work – work that will have an impact on the health and well being

of Papua New Guineans - when they went missing off the coast of Milimata in the Kaliai-Kove Local Level Government area in West New Britain province in August 2011.

Investigations into their disappearance were abandoned due to lack of finance and resources to continue.

"We hope to get to the bottom of this tragic mystery at long last," Mr Akunaii said.

## UPNG honours students train at IMR

Ten honours students from the University of Papua New Guinea (UPNG) joined IMR in November for a six week internship program.

Eight interns are training in Goroka with the Partnership in Health and Pneumococcal Conjugate Vaccine units while another two are based in Madang in the parasitology laboratory assisting with the Fetal Immunity to Malaria project.

Intern Dionysia Siri said this was her first time to attend this type of training. "Since coming to IMR, I have been able to conduct laboratory procedures such as polymerase chain reaction and DNA extraction which we've only done in theory at the university," she said.

Intern Seth Figa said the training was encouraging him to conduct medical research in the future.

"I wish to pursue a career in the medical research field to find the causes and possible preventive measures for invasive diseases in PNG," he said.

The annual internships are highly sought after by PNG undergraduates and form part of a range of training opportunities for young scientists provided by IMR.

## IMR drivers undergo first aid training



IMR driver Tom Jones performs cardiopulmonary resuscitation on a dummy, watched by Philip Mogia (left) and Masi Sima (standing), and PNG Red Cross instructor Salome Dukuno.

IMR drivers are now ready to provide emergency assistance, after first aid training from the PNG Red Cross.

Around 16 staff -- 15 drivers and one housekeeping staff undertook the three day course in Goroka in November, run by PNG Red Cross First Aid Instructor Salome Dukuno.

The training covered both theory and practical work, including an emergency action plan and demonstrations of cardiopulmonary resuscitation (CPR) and bandaging.

they go and help children, adults and pregnant women."

"Anyone who has been trained can also train their community members in these skills too", she said.

Driver Philip Mogia said that IMR drivers are on the road frequently transporting staff and visitors and road safety is important.

"This training is preparing us to save their lives and our lives when accidents happen to us," he said.

Mrs Dukuno said drivers and cleaners needed to know how to prepare for unexpected casualties.

"It's good getting first aid training to staff members as knowing such skills can save lives especially in situations involving accidents and excessive blood loss," she said.

"Our training doesn't have boundaries and they can use their skills anywhere

## IMR work on display at Morobe Show

The Institute participated in the 51st annual Morobe Agriculture Show held on 27-28 October at the Lae Show Ground. PNGIMR was among 13 government and non-government organizations that took part in the Health Expo section of the Show.

The event was a good opportunity for six IMR staff to promote the Institute to the hundreds of show goers that visited our exhibition booth. It also generated a lot of interest among the show goers, who learnt how our research contributes to improving their health. Many students

were able to complete their health assignments with assistance from our staff. The Institute was represented by five staff from Goroka and one from Madang.



Staff explaining the different types of malaria parasites.



Showgoers check out the IMR exhibition booth.



Showgoers listening as staff from the Sexual and Reproductive Health Unit explain the different STIs.

# Training Nius

## Project Management Refresher

These workshops were run in Madang (July) and Goroka (November) by Monika Vnuk (CASS), Eunice Wotene (Accountant) and Morris Sinivei (Internal Auditor). It targeted project officers and managers, focusing on planning, budgeting, project accounting, implementation, monitoring, auditing and reporting. Twenty-three staff attended, twelve in Madang and eleven in Goroka.

## Red Cross First Aid Training

PNG Red Cross ran two two-day courses in November and December for both project drivers, housekeeping staff and field-based scientific officers. Drivers are seen as vital to emergency efforts as they are often in the field, and nine took part in the training, while around 15-20 field officers attended. The training covered basic first aid, including bandages and slings, life support (resuscitation), burns management, wounds and bleeding, fractures and tissue injuries and handling poisons.

## CVs for Scientists writing workshop

This workshop on 11 December in Goroka targeted scientific officers and looked at the best way to present your resume. Presenters were Mary Amos (Human Resources), Dr Justin Pulford (Population, Health and Demography Unit) and Dr Wendy Levy (Communications).

## 2012 Honours students working hard

This IMR/UPNG/PNG LNG Honours Students program under Partnership in Health Training was formerly known as Fogarty. Honours students Diana Timbi, Marinjho Jonduo, Rebecca Vinit, Tamarah Koleala and Elvin Lufele have completed their assessments and are working on data analysis, thesis preparation and write up. Theses are due in February 2013, followed by thesis defence seminar presentations at UPNG.

## 2013 Honours students chosen

Students have been selected for the

IMR/UPNG/PNG LNG Honours Students under the Partnership in Health Training Program. They are Tilda Orami (Immunology), Nola N'Drewei (HIV/STI), Lee Marava (PiH), Benisher Kombut and Joe Jude from UPNG School of Natural and Physical Sciences (Biology/Chemistry Major). The students are working on their project design and project titles.

## Summer interns

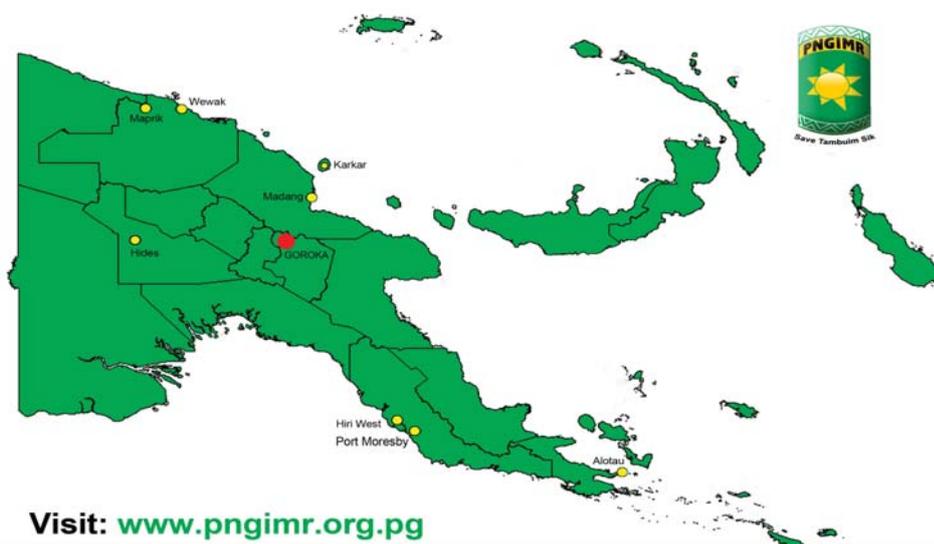
Ten summer interns are working with IMR until 21 December 2012, when they will submit their reports. This will count as credit points towards their final degree.

## Masters success

Pioto Namuigi has been awarded a Masters of Public Health by the UPNG School of Medicine and Health Sciences. Dr Paul Harino and Pamela Toliman have submitted their theses to UPNG and await comments, while Dr Maria Ome and Dr Regina Wangnapi expect to submit their theses before the year ends.

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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