



# PNG NEUROSURGEON achieves outstanding results

## Dr William Kaptigau's extraordinary effort to improve patient outcomes for the people of Papua New Guinea

Former Rowan Nicks Scholar Dr William Kaptigau has become the first surgeon in the country to graduate as Doctor of Medicine for his research based on his audit over the first decade of the introduction of a neurosurgical service at Port Moresby General Hospital, Papua New Guinea.

Dr Kaptigau, PNG's first national neurosurgeon, established the country's first neurosurgery service in 2004 and from the outset began compiling rigorous reports of activity and outcome across the full range of procedures conducted.

Until he established the service, with the assistance of neurosurgeon Professor Jeffrey Rosenfeld and the former Professor of Surgery at the University of Papua New Guinea (UPNG) Professor David Watters, most neurosurgery cases were treated by general surgeons across the country.

Marianne Vonau, the College Treasurer is another ongoing supporter of William and neurosurgery in PNG, having led a neurosurgery team with neurosurgeon, Teresa Withers, to assist William over the past six to seven years.

Dr Kaptigau's audit showed a dramatic decrease both in the mortality rate from severe head injuries and complication rates in patients treated in the Port Moresby unit over the decade of its establishment, indicating the value of the specialist surgical service.

Conducting all the research alone while heading the unit, training another neurosurgeon and also providing general surgery, Dr Kaptigau's graduation in April as Doctor Of Medicine from UPNG represents a remarkable achievement, according to Professor Watters.

Professor Watters trained Dr Kaptigau as a general surgeon during his time as Professor of Surgery at UPNG, and lent support to his application for a Rowan Nicks Scholarship when Chair of the RACS International Committee.

Now the Vice President of the College, the Divisional Director of Surgery at Geelong Hospital and Professor of Surgery at Deakin University, Professor Watters has maintained his support and mentorship to Dr Kaptigau since his departure from PNG in 2000.

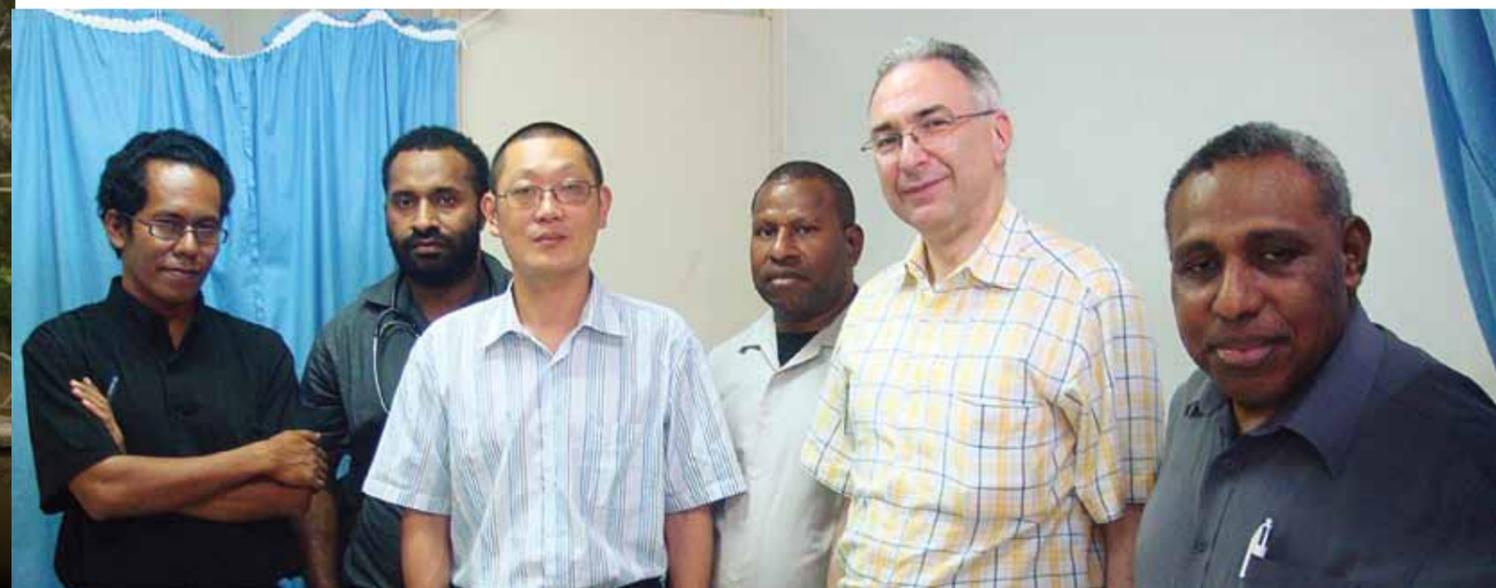
"Very few surgeons in PNG go onto a higher degree and the fact that Dr Kaptigau completed his research and thesis when he was dealing with his own health issues shows tremendous strength and resolve," Professor Watters said.

"He is the first surgeon to get his Doctor of Medicine, which is a remarkable achievement in itself. The fact that he took on that work while running the neurosurgery unit, training and doing general surgery makes it even more outstanding.

"The audit of his unit, which predominately treats head trauma, spinal disease, hydrocephalus and space-occupying lesions, demonstrates continuous improvement during the decade of his leadership, particularly in head injury outcomes. Willie had already published a number of a papers in a focus edition of the 'PNG Medical Journal' dedicated to neurology and neurosurgery [2007; Vol 50 March-June pp 1-101].

"For example, in 1996, an article comparing head injury outcomes in Goroka and Port Moresby demonstrated a mortality rate for severe head injury (GCS < 9) of 60 per cent in Port Moresby and 55 per cent in Goroka," Professor Watters said.

Joao Pedro (Timor Leste Surgeon), Lino Tom (Trainee), Professor Ren Hong Bing, Sammy Thomas, Professor Jeffrey Rosenfeld and William Kaptigau.



"A decade later in 2007, the mortality from severe head injury in Port Moresby had reduced to 26 per cent which is a great credit to the work undertaken by Dr Kaptigau not only through his own skills as a neurosurgeon, but also because of the training he has provided others in pre-hospital trauma care and post-operative care.

"Neurosurgery under his leadership is one of the few specialties in PNG to produce annual written reports and make submissions for vital equipment all as part of Dr Kaptigau's dedication to advancing the specialty and improving patient care in PNG.

"His dedication and commitment to his work and his patients has shown PNG what a specialist neurosurgery service can achieve and what it can become, even in an environment of limited resources given that Dr Kaptigau didn't even have access to a CT scanner until 2008.

"He has saved many lives, particularly the lives of children suffering from hydrocephalus, has given 10 years of excellent service to the people of PNG and his audit data describes extremely impressive results across a range of procedures."

Dr Kaptigau completed medical school in 1987 and was later posted to Kimbe where he spent three of five years working as a medical superintendent.

Accepted for surgical training in 1995, he completed his MMed in 1999 with a thesis on the changing patterns of abdominal surgery in Port Moresby over 40 years.

Having chosen to pursue training in neurosurgery, Dr Kaptigau came to Australia in 2002 under the Rowan Nicks Scholarship and the International Scholarship and carried out his attachment at Townsville Tertiary Hospital under Mr Eric Guazzo and Mr Reno Rossato before moving to Melbourne to work under the supervision of Professor Rosenfeld.



By the end of 2004, he had successfully completed his Higher Postgraduate Diploma in Neurosurgery at UPNG, becoming not only the first qualified neurosurgeon trained in PNG, but also the first in the South Pacific.

Mr Guazzo, who continues to work and teach at Townsville Tertiary Hospital, said he first met Dr Kaptigau during a College-managed Pacific Island visit to PNG in the late 1990s.

He said he was so impressed with his skills and dedication to his patients, he encouraged Dr Kaptigau to apply for a Rowan Nicks Scholarship and organised visiting rights to allow him to train and operate under supervision at Townsville Hospital.

During the year of his visit, Dr Kaptigau conducted outpatient consultations, operated under supervision and participated in ward work both at Townsville Hospital and the Mater Private hospital alongside Mr Guazzo.

While there, he participated in the treatment of 117 cases including spinal surgeries, tumour, skull fracture and VP shunt surgeries.

Mr Guazzo said Dr Kaptigau brought his wife Eimi, a senior nurse, and his children with him to Australia for the duration of his visit.

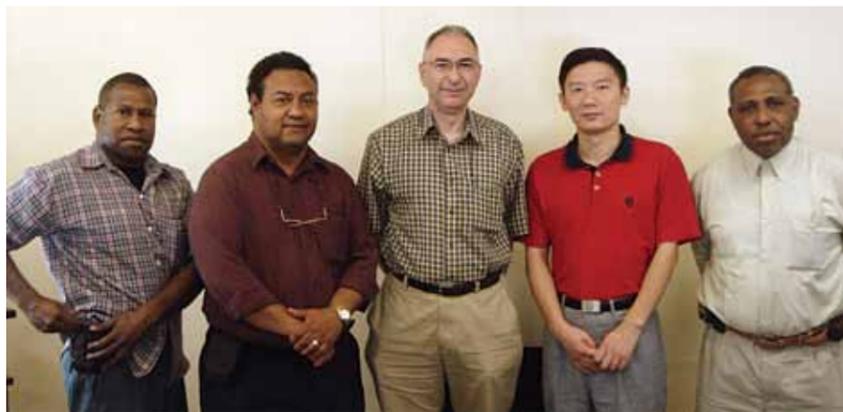
“When I met William I was very impressed by his devotion to the people of his country while it was clear he had remarkable capabilities,” Mr Guazzo said.

“At the time he came to Townsville he was a very capable General Surgeon, but was determined to develop his skills in neurosurgery so we selected cases for him to work on that would advance that ambition.

“We included the management of trauma of both the head and the spine, infections of the central nervous system, tumour surgery and a variety of spinal procedures.

“It seemed a huge task to set up a neurosurgery service in PNG with all the economic and social challenges involved, but if anyone could do it, it was Dr Kaptigau not only because of his surgical skills, but because he is a champion for his country and a strong advocate for his people.”

Mr Guazzo said he remained in contact with Dr Kaptigau following his return to PNG and often consulted on complex cases via email and telephone.



L-R: Mr Sammy Thomas (PNG's second trained neurosurgeon, now working in Madang Base Hospital), A/Prof Ikau Kevau (Head of Surgical Department, University of Papua New Guinea, and orthopaedic surgeon, Port Moresby General Hospital), Prof Jeff Rosenfeld OBE FRACS, Professor Xie Yan Feng (Visiting Chinese Neurosurgeon, now is based at Chong Qing Medical University Affiliated Hospital-China), Mr William Kaptigau MD, PNG's first neurosurgeon.

Dr Kaptigau was so highly regarded, Mr Guazzo said, that he was invited to attend the 2006 Annual Scientific Meeting of the Neurosurgical Society of Australasia.

### He was the right person

In recent years, Dr Kaptigau has also selected patients with benign pathology for pro-bono neurosurgery by Mr Guazzo and others at the Mater Hospital.

Mr Guazzo congratulated him on achieving his Doctor of Medicine and said Dr Kaptigau was a wonderful example of the worth of the Rowan Nicks and International Scholarships.

“I've long been a great supporter of the RACS' commitment to promoting expertise in our geographical neighbourhood,” he said.

“Dr Kaptigau is a perfect example of how we can help many people by selecting the right person and giving them the skills and support they need to do the work that needs to be done.”

Professor Jeffrey Rosenfeld, Head of the Department of Surgery at Monash University and Director of the Department of Neurosurgery at the Alfred Hospital, helped Dr Kaptigau establish the neurosurgery service in 2004.

Having completed a six-month rotation in PNG when a Trainee at the Royal Melbourne Hospital, Professor Rosenfeld has been travelling back to PNG to

teach and operate for more than 30 years and supervised Dr Kaptigau during his attachment to the Alfred in 2003.

Since then, he has helped develop a neurosurgery curriculum for the UPNG, acted as an examiner and worked closely with Dr Kaptigau to set up the audit which he used as the basis of the thesis.

“William set out to see whether neurosurgery patients treated in one dedicated unit led to improved results and to do this he collected and analysed the outcomes of 3626 patients over 10 years,” Professor Rosenfeld said.

“His findings showed a dramatic improvement in head injury cases, better management of more complex patients and a reduction in complication rates.

“Both the results and the research represent an enormous achievement and the culmination of years of extraordinary effort to improve the health system and patient outcomes for the people of his country.

“David Watters and I wrote a book a few years ago called ‘Neurosurgery in the Tropics’ because we believed such a resource was needed for General Surgeons treating such cases in developing countries.

“Then William took up the challenge of becoming a neurosurgeon and without him there would be no neurosurgery service in PNG.”

With Karen Murphy

IV/Oral  
**ZYVOX**<sup>®</sup>  
(linezolid)

ANOTHER  
**ZY**

**OX**<sup>®</sup>  
VICTORY

EVIDENCE-BASED RESULTS<sup>1-4</sup>

PBS Information: This product is not listed on the PBS.

**BEFORE PRESCRIBING ZYVOX<sup>®</sup> (LINEZOLID) REVIEW FULL APPROVED PRODUCT INFORMATION AVAILABLE AT WWW.PFIZER.COM.AU.**

**ZYVOX<sup>®</sup> (linezolid 2mg/mL, 600mg, 20mg/mL) injection, tablets, granules for oral suspension. INDICATIONS:** Infections due to resistant organisms, including MRSA and VRE. No clinical activity against Gram-negative pathogens. **CONTRAINDICATIONS:** Hypersensitivity; Monoamine oxidase inhibitors; Potential interactions producing elevations of blood pressure; Potential serotonergic interactions. **PRECAUTIONS:** Monitor blood in certain populations. Antibiotic associated pseudomembranous colitis. Reports of serotonin syndrome when co-administered with serotonergic agents. Symptoms of visual impairment; monitor visual function. Convulsions (rare). Safety and effectiveness following 28 days not established. Gram-negative pathogens. Caution in patients with severe renal and hepatic insufficiency. **Pregnancy.** Category B3. **Lactation.** Discontinue. **INTERACTIONS:** Tyramine; serotonergic agents; vasopressive/dopaminergic agents; rifampicin.\* See full PI for details. **ADVERSE EFFECTS:** Headache, candidiasis; taste perversion; GI disturbances. Peripheral and optic neuropathy. Lactic acidosis, angioedema, rash, myelosuppression, bullous skin disorders and serotonin syndrome (very rare). Abnormal haematology and liver function tests. See full PI for details. **DOSAGE AND ADMINISTRATION:** IV (30-120 min infusion) or oral b.i.d (with or without food). **Adults and adolescents:** CAP/ nosocomial pneumonia: 600 mg IV 12 hourly or orally b.i.d for 10 to 14 days; SSTI: 400 mg to 600 mg orally b.i.d or 600 mg IV 12 hourly for 10 to 14 days; Enterococcal infections: 600 mg IV 12 hourly or orally b.i.d for 14 to 28 consecutive days. **Children:** Nosocomial pneumonia and SSTI: 10 mg/kg IV 8 hourly or orally t.d.s for 10 to 14 days. Enterococcal infections: 10 mg/kg IV 8 hourly or orally t.d.s for 14 to 28 days. **Neonates:** Refer to PI. See full PI for detailed dosing schedule. The current product information is available at [www.pfizer.com.au](http://www.pfizer.com.au).

\*PLEASE NOTE CHANGE(S) IN PRODUCT INFORMATION.

Pfizer Australia Pty Limited. ABN 50 008 422 348. 38-42 Wharf Road, West Ryde NSW 2114.  
\*Registered trademark. Medical Information 1800 675 229. [www.pfizer.com.au](http://www.pfizer.com.au) P9133 08/2014 PFIZ3683

References: 1. Weigelt J, et al. *Am J Surg*. 2004; 188:760-6. 2. Wunderink RG, et al. *Clin Infect Dis*. 2012; 54:621-9. 3. Birmingham MC, et al. *Clin Infect Dis*. 2003; 36:159-68. 4. Wilcox M, Nathwani D, Dryden M. *J Antimicrob Chemother*. 2004; 53(2):335-344.

**Pfizer** Anti-Infectives