



THE UNIVERSITY OF  
WESTERN AUSTRALIA

# MeDeFacts

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MEDICINE, DENTISTRY AND HEALTH SCIENCES

School of  
Dentistry



HENRY SCHEIN HALAS MANAGING DIRECTOR MR MIKE COVEY (CENTRE) WITH THE UNIVERSITY OF WA'S DEPUTY VICE-CHANCELLOR (COMMUNITY AND ENGAGEMENT) PROFESSOR KENT ANDERSON (RIGHT) AND PROFESSOR CAMILE FARAH, HEAD OF THE SCHOOL OF DENTISTRY AND DIRECTOR OF OHCWA, AT THE GIFT SIGNING CEREMONY.

Faculty of Medicine,  
Dentistry  
Health Sciences

## Digital 3D radiology

### arrives at the School of Dentistry

Dental screening has stepped up to a state-of-the-art experience at the Oral Health Centre of WA (OHCWA), thanks to an expansive gift from one of the School's new industry partners.

Henry Schein Halas, a leading global dental supply company, has donated equipment and software for a comprehensive Radiology Suite at OHCWA and the Faculty's School of Dentistry. **Professor Camile Farah**, Head of the School and Director of OHCWA said it would boost clinical practice, research and teaching capabilities and move The University of WA ahead of other Group of Eight (Go8) dental schools.

He said the generous gift included a 3D cone beam CT (CBCT) scanner, a digital OPG X-ray machine, two intra-oral X-ray units, intra-oral X-ray scanners that convert digital images, two dental chairs, and user-friendly software to manipulate and view all images across all clinical facilities. "It's a full, comprehensive turn-key solution," he said.

The CBCT scanner is an upright compact CT machine designed to scan the head and neck with low-dose radiation and produce accurate 3D representations of the patient. "The novelty of our CT scanner is that not only is it a 3D volumetric radiography system but it also has built into it cutting edge facial photography software able to overlay soft tissue features of the patient over bony hard tissue features,"

*Continued on page 9*

### A new Dean

After an extensive international search for a new Dean of the Faculty, **Professor Wendy Erber**, Head of the Faculty's School of Pathology and Laboratory Medicine, has been appointed.

She will take up her role this month. *MeDeFacts* will feature a full profile of Professor Erber in the March edition.

**Professor Geoff Riley**, who stepped up to guide the Faculty through 2015 as Acting Dean, was thanked by The University of WA's Senior Deputy Vice-Chancellor, **Professor Dawn Freshwater**.

"I speak on behalf of the entire senior team when I say how grateful we are to Geoff for his generous leadership of the Faculty during 2015," she said.

Professor Riley was aided in his role by the Deputy Dean, **Professor John Newnham**, and the appointment of two acting Deputy Deans, **Professor John Challis** and **Professor Erber**.

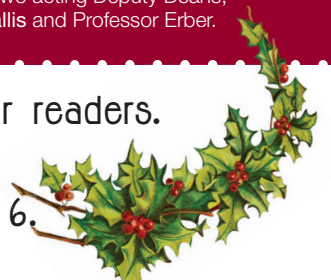
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Previous editions of MeDeFacts can be viewed online at [www.meddent.uwa.edu.au](http://www.meddent.uwa.edu.au) Go to "News and events".



Season's greetings to all our readers.  
We wish you happy and  
compassionate times in 2016.



# Keeping ballerinas on *their toes*

Reflective markers, a 3D foot model and a dedicated computer program are being used in a much-needed WA study to capture information about the motion of the most injury-prone part of ballet dancers.

Dr Sarah Carter, a University of WA podiatry graduate and PhD student in the School of Surgery, is conducting research into the biomechanics of the foot and ankle in university-level ballet dancers.

She is conducting her research in conjunction with the WA Academy of Performing Arts (WAAPA), looking at pre-professional ballet dancers studying there. Her supervisors include Dr Luke Hopper, a post-doctoral Research Fellow at WAAPA and Professor Alan Bryant, Head of the Podiatric Medicine Unit (PMU) at UWA.

She is designing a 3D multi-segment foot model to calculate the joint kinematics within the foot, looking at the different motions the foot and ankle go through when a ballerina is dancing.

A big gap in knowledge is being filled by the study. "There is no 3D model specific for analysing a dancer's foot, and the foot and ankle is the most injured anatomical region in dancers, so having an appropriate multi-segment foot model for dancing is important," Dr Carter said.

The 3D multi-segment model involves placing numerous reflective markers on a ballet dancer's foot and using up to 14 infra-red cameras to capture a 3D image on a computer screen. "From that, the model which I have written will divide the foot into different segments and measure the movements between each segment, which calculates the degrees of movement that are occurring between each segment," she said. This provides

anatomical information about the foot and ankle.

Once perfected, the model will be used to assess dancers during a screening process when they first join WAAPA. "If a dancer becomes injured we can assess them again to work out what's going on," Dr Carter. The model can also be used to track the dancers year by year.

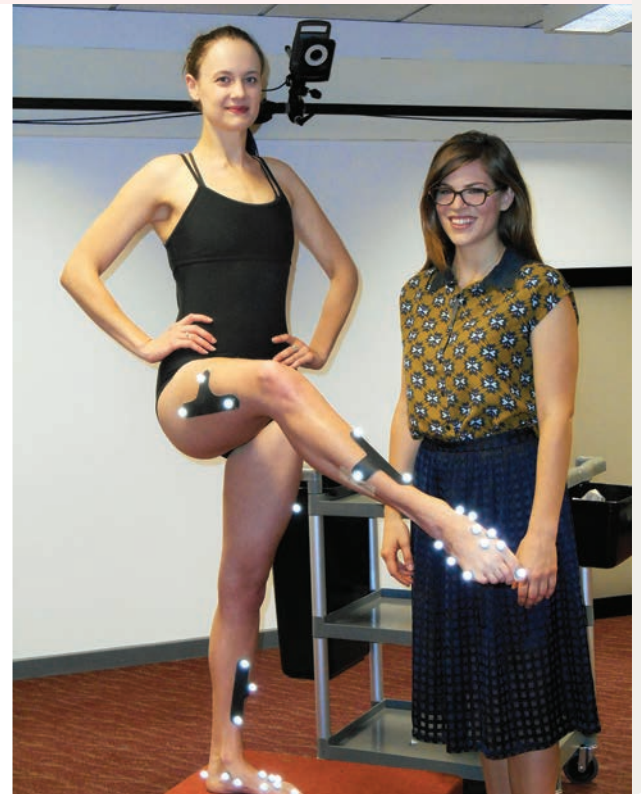
The model could be applied more broadly and used in other forms of dance, including modern, hip-hop, and so on.

It is important to have a model dedicated to dance, as opposed to other activities such as walking or running, because the range of motion the foot goes through in dance is a lot greater, Dr Carter said. "With walking, the first metatarsophalangeal joint (big joint of the big toe) will translate through approximately 30 degrees of dorsiflexion but in dancing the joint reach up to 90 degrees of dorsiflexion." And that's just the first metatarsophalangeal joint.

Of all ballet injuries, 15-33% occur in the ankle joint and 10-25% occur in the foot, with the likelihood increasing with age.

Injury in ballet dancers is common but under-reported, Dr Carter said. "They are often scared they will be kicked out of the company or not get the role they want. Dancers will dance when they are injured. They have a high pain tolerance. And a lot of dancers self-medicate blisters and other things."

Some will dance with sprains and ignore foot pain which may later develop into a stress fracture. Dancers can also



DR SARAH CARTER WITH FIRST YEAR DOCTOR OF PODIATRIC MEDICINE AND DANCER CATHERINE CRABB, PREPARING FOR A LOWER LIMB ANALYSIS WITH 3D IMAGING.

develop ankle spurs and impingement, Achilles tendon injuries, foot muscle spasms and tears, pain in the first toe joint, and disfigurement in the toes.

Treatment can involve rest, general treatment, taping, modifications to their street shoes, orthotic therapy, an off-loading boot or alteration of their dance technique.

"But a lot of injuries can be career-ending injuries," Dr Carter said.

-By Cathy Saunders

## Pathway to follow a dream – program wins award

A determination to encourage and help disadvantaged students to aspire to a university education has led to a prestigious national award.

The University of Western Australia has won The Australian Financial Review's inaugural Higher Education Equity and Opportunity Award for its Aspire UWA outreach program that works with students from low socio-economic, rural and regional, and Indigenous backgrounds. Students from 52 partner schools take part in activities in their schools, at the university and in the community.

The Faculty of Medicine, Dentistry and Health Sciences plays a key role in the

program by providing a pathway into medicine and dentistry for students from low socio-economic schools via its Broadway program and from regional schools via its rural and remote program.

The Faculty's Student Support Coordinator, Mrs Sue Pognault, said the award was a great reward for the whole team. "I think a recognition like that Australia-wide shows how much significance we've had with regard to working in the equity and diversity side of things with both pathways."

The Faculty team made 116 visits this year to Broadway and rural schools around the State and seven more

schools have joined the program. "Their ATARs (Australian Tertiary Admission Rank) are higher than they have been," Mrs Pognault said. "It just shows that by giving them that bit of support, they can follow through with their dream of applying." Other aspects of Aspire WA are delivered by the School of Indigenous Studies and Student Services.

The AFR award judges said the UWA entry stood out for the scale and extent of its impact. "We commend the University of Western Australia for walking the walk when it comes to equity and opportunity."

# The Dean's Desk

By Professor Geoff Riley

## Extraordinary people

I am constantly astonished that, despite the challenges of financial constraints and, in particular, the continuing pressure on funding of Clinical Academics by the Health Department, the extraordinary quality and variety of the work undertaken by Faculty staff continues to grow. In 2015 we have seen the ongoing implementation of our new professional postgraduate courses – Doctor of Medicine (MD), Doctor of Dental Medicine (DMD), and Doctor of Podiatric Medicine (DPM), the completion and occupation our facilities at the Perkins Institute on the Fiona Stanley Hospital campus, and continuing research success.

In the Teaching and Learning portfolio, we have seen continued successful implementation of the MD, DMD and DPM, the latter two being fully accredited. The new MD underwent a positive follow-up assessment by the Australian Medical Council earlier this year, with a final outcome anticipated in the coming weeks. The Master of Pharmacy is fully accredited, while the Master of Social Work is currently undergoing reaccreditation. There was strong demand for these courses: Master of Pharmacy (75 enrolments) and Master of Social Work (117 enrolments, a 31% growth over 2014).

As well, several new postgraduate courses commenced in 2015, including Master of Clinical Pathology, Master of Child Health Research, Graduate Certificate in Emergency Medicine Research and Master of Health Science (shared with Faculty of Science). We also saw ongoing success of several of our undergraduate majors, with strong growth in Pathology, Genetics, Microbiology, Population Health and Pharmacology. There are over 2100 students enrolled in our undergraduate units in 2015.

### Above its weight

In the domain of research, the recently released Excellence in Research for Australia results demonstrate that the Faculty is still punching above its weight with all 13 of the assessed domains of activity being rated as “above” or “well above” world standard. Eleven senior Faculty staff were inducted this year as Fellows to the Australian Academy of Health and Medical Sciences. The recently announced National Health and

Medical Research Council results for 2016 have almost \$19 million allocated to Faculty staff for project grants, \$1.5 million for Fellowships and two Centres for Research Excellence (National Centre for Asbestos Related Diseases, and Reducing the Effects of Antenatal Alcohol on Child Health) to the value of \$5 million. In addition, more than \$1.6 million was awarded for three NHMRC-Australian Research Council Dementia Research Development Fellowships to Faculty researchers.

The WA Health Translational Network continued to develop with key involvement from Faculty staff and the formal appointment of the new Executive Director, Professor John Challis, and establishment of the Board of Management. The UWA Poche Centre for Indigenous Health supported various research activities under its theme of “Healthy Minds, Healthy Lives” with key academic appointments and collaborative research events.

### Initiatives

The WA Preterm Birth Prevention Initiative was launched this year, led by School of Women’s and Infants’ Health key researchers. It is a world-unique program aiming to safely lower the rate of preterm birth in WA. The Raine Study Group will continue its long-standing longitudinal cohort study, one of the oldest successful pregnancy cohorts in the world, with the 25 year follow-up for the original cohort starting next year. This group officially moved to the main UWA campus last year and was realigned under the School of Population Health this year. The Population Health Research Network has also officially joined the Faculty, having been realigned from the Telethon Kids Institute.

### External relations

There has been well deserved recognition of the Aspire program, which won the Australian Financial Review Higher Education Equity and Opportunity Award (see page 2). The Faculty aspects of the program are best practice in Australia and are a testament to our team led by Sue Pougnault and assisted by Wendy Williams and Debra Levene.

The Faculty continues its strong international engagement with several overseas universities to initiate, develop

and expand academic collaborations, particularly within China (Nanjing, Shanghai, Zhejiang, Kunming, Beijing), but also with South East Asia and indeed the rest of the world through many formalised (at Faculty or University level) and individual collaborations.

Finally, I would like to spotlight the work of the professional staff of the entire Faculty. “Bureaucracy” has come to be a pejorative, which sometimes involves a lazy shifting of responsibility for failure of a project. However, good quality administration is, I believe, often insufficiently appreciated - it is a blessing that we too often take for granted. This Faculty is characterised by administrators who are committed to delivering high quality service and I would like here to thank them for that commitment and tolerance of ingratitude. We should celebrate them, often!

This is the pleasure and privilege of being the Dean of a Faculty such as ours - the constant contact with wonderful people doing extraordinary work. It is important to be reminded that, despite the challenges, our people’s work continues to contribute ultimately to better outcomes for our patients here and populations around the world. It has been said that the goal of medicine is to relieve suffering. We can be proud of the part we play.



THE FACULTY'S PHARMACY DIVISION STAFF WHO ARE PART OF THE CENTRE FOR OPTIMISATION OF MEDICINES TEAM.

## Taking medicines research up several notches

Medicines – most people take them at some stage of their lives but they are not always used optimally.

And novel uses for established drugs along with better ways of delivering them are always needed.

In a bid to tackle these realities and improve health outcomes via research and education, the Centre for Optimisation of Medicines (COM) was set up in 2013 in the Pharmacy Division of the Pharmacology, Pharmacy and Anaesthesiology Unit in the School of Medicine and Pharmacology.

The Director, **Professor Rhonda Clifford**, said the Centre was a collaborative effort. "We realised that Pharmacy's expertise is medicines so what we wanted was something that brought all the research we were doing in the Pharmacy Division under the one banner," she said.

The research is diverse but broadly looks at the optimisation of medicines from two angles. One involves science-based research, which focuses on innovation in drugs and drug development, including novel drug formulations and modes of delivery. The research includes studies into fields such as paediatric and complementary medicines.

The other stream is practice-based research, which centres on the practice of pharmacy, both in the community and in hospitals, and the use of medicines by consumers, involving community education about compliance and correct usage.



"It is very much about the consumer and how to make sure consumers know about their medicines and how to use them," Professor Clifford said.

"We are working with community pharmacists. They are readily accessible because of their long opening hours, so by utilising them as a resource to help people use their medicines correctly we could have a lot [fewer] consumers who get confused and end up back in hospital or who take two of the same medicine."

The Centre also works with hospital pharmacists through the recently-established WA Hospital Pharmacy Research Alliance (WAHPRA), of which Professor Clifford is Deputy Chair. "WAHPRA exists to work out what the most strategic and useful projects can be done in hospital pharmacy to optimise patient care," she said. "So at the moment we are looking at VTE (venous thromboembolism) risk for patients undergoing surgery and trying to get a picture of what's going on in the hospital setting."

The Centre's other collaborators include Curtin University, the major tertiary hospitals, including Princess Margaret Hospital, the

WA Health Department, aged care facilities, and other Schools in the UWA Faculty of Medicine, Dentistry and Health Sciences.

Completed projects in aged care have looked at urinary tract infections, vitamin D deficiency and the risk of falls and fractures, and the over-use of benzodiazepines.

Current projects cover mental and sexual health, anaphylaxis, and chronic illnesses such as diabetes and asthma.

One such project is a study to determine whether effective implementation of the Short Acting Beta Agonist (SABA) guidelines can result in best practice by pharmacists and improved health outcomes for patients.

"The COM is running asthma research, trying to improve the care of asthmatic patients in primary care because patients with asthma have a lot of contact with community pharmacists to get their Ventolin (salbutamol)," Professor Clifford said.

"We are looking for indicators to assist pharmacists to identify poorly controlled asthma and refer the patients to their general practitioner."

*(See story on deprescribing on opposite page.)*

-By Cathy Saunders



## Accreditation of new degree under way

A team of six assessors from the Australian Medical Council (AMC) spent a week in WA in early August as part of the accreditation process of the Faculty's new postgraduate Doctor of Medicine (MD) degree.

They visited the main University of WA campus and the Rural Clinical School sites of Bunbury and Busselton. Hospital visits took in the Fiona Stanley and Sir Charles Gairdner Hospitals and the Joondalup Health Campus.

**Professor Tony Celenza**, Director of the Education Centre, said the visit was positive and the final report was expected by the end of the year.

An accreditation is valid for up to a maximum of six years.

THE AUSTRALIAN MEDICAL COUNCIL ACCREDITATION VISIT INCLUDED THE RURAL CLINICAL SCHOOL IN BUNBURY. (FROM LEFT) DR ANDREW KIRKE AND ASSOCIATE PROFESSOR GAVAN WHITE OF THE RCS, PROFESSOR IAN WILSON OF THE AMC, ASSOCIATE PROFESSOR BRONWYN PEIRCE OF THE RCS, DR JENNIFER SCHAFER OF THE AMC, DR CLYDE JUMEAUX AND DR CLARE WILLIX OF THE RCS, AND MS FIONA VAN DER WEIDE OF THE AMC.

## Taking patients safely off drugs

When older people have a fistful of medicines they take daily, how can doctors decide which ones to safely cut out?

A team in the Faculty's School of Medicine and Pharmacology are conducting a randomised controlled trial of deprescribing that may reduce harmful polypharmacy. The trial aims to recruit 950 people aged over 65 years living in residential aged care.

The team includes clinical pharmacist Mrs Amy Page, a PhD student, and her co-supervisors Associate Professor Christopher Etherton-Beer, Dr Kathleen Potter and Professor Rhonda Clifford, who is Director of the Centre for Optimisation of Medicines.

While deprescribing is accepted clinical practice, there has been little to guide doctors in their decision-making. The team is testing a four-step algorithm for safe deprescribing, which can be used by GPs and specialists but also by pharmacists to make recommendations to treating doctors.

Mrs Page said her study, which nestled within the larger trial, had validated the algorithm and now was looking at adverse drug withdrawal effects.

"I personally became interested in this because I had seen a lot of people who were taking what I thought were a lot of medicines for their stage of life," she said. "Medicines that may be perfectly appropriate and sensible when somebody is 30 or 50 might not make as much sense at 85.

"There is that point where the scale tips from getting more benefits than side effects to getting more side effects than potential benefit.

"If you are giving a medicine to modify a potential serious future event like a heart attack or a stroke, if somebody is 50 they have got a lot of potential years to benefit from that modification of their risk. If they are 85 or 90, how many years do they have to benefit from that modification of their risk? But they still get all the same side effects."

Some patients were on medicines that might have been originally prescribed as a short course but had been continued. Other medicines might be part of a "prescribing cascade" and were added to counter the side effects of another drug which had since been discontinued. Some medicines might be taken for symptom relief even though the symptoms were now stable.

Mrs Page said inappropriate medicines in older people could lead to poor outcomes such as falls, hospital admissions, frailty and impaired cognitive impairment.

It was generally agreed that the maximum number of drugs one person should be taking



MRS AMY PAGE

was five. Yet some patients were on up to 20 different prescribed medicines.

Nine out of 10 older adults with dementia in residential aged care use five or more medicines and 40% of residential aged care patients are prescribed sedative medicines.

If you have patients you would like to enrol in the study, please contact Associate Professor Etherton-Beer at christopher.etherton-beer@uwa.edu.au

(See story on the Centre for Optimisation of Medicines on opposite page.)

## Helping dental students to see *more clearly*

By Greg Crane, fifth year dental student and UWA Dental Alumni Society representative

Dental loupes are the most popular type of magnification in dentistry.

Once used only by surgeons and specialist dentists such as endodontists, they have now become commonplace in general practice and are increasingly popular with dental students.

They not only have the obvious benefit of increasing the magnification of the visual field, but have also been shown to significantly improve posture - especially if utilised early e.g. in dental school - increase productivity, and improve the quality of performed work. The two most common types of loupes available are through the lens (TTL) and flip-up.

Loupes must be fitted correctly as poorly designed or adjusted loupes can cause or worsen pain syndromes. Reportedly more than 70% of dentists experience headaches or discomfort from their neck and shoulders.

Working with a forward head posture of 20 degrees for more than 70% of the time is associated with neck pain. Considering that most dentists work with a forward head posture of greater than 30 degrees for 85% of the time, it's no wonder there is such a high percentage of neck and back pain in dentists.

Seeing a need, the UWA Dental Alumni Society contacted Orascope. The company, founded in 1981 and a leader in medical vision for 34 years, was the first company to release a totally wireless loupe and headlight combination. Mr Ashley Heuchan and Ms Stephanie Green, of Orascope, very generously donated five pairs of loupes to the student dental clinic of UWA. This donation will be extremely valuable for the dental students and is hugely appreciated.

The UWA Dental Alumni Society, represented by Dr Amit Gurbuxani, of the School of Dentistry, provides a link between alumni members and the School by supporting student activities and improving the quality of student life. The Society organises and hosts a variety of CPD talks and fundraisers throughout the year with all proceeds going towards student support.

## A link between Dental School and its graduates

By Dr Anish Shah, Committee Member of the UWA Dental Alumni Society

Much needed support from various people has placed the UWA Dental Alumni Society on firm financial footing to further its goal of creating a strong network between the School of Dentistry and its graduates.

The Society would like to thank all its supporters for making this year so successful. Among them are the honorary speakers at our Winter Series lectures - Dr Michael O'Halloran, Dr Gus Jang, Dr Tom Huang, Dr Mithran Goonewardene, Dr Brent Allan, Dr Brad Shepherd and Dr Ramesh Balasubramaniam.

Other supporters include the Australian Dental Association (WA Branch), which provided its lecture facilities at no cost and the alumni who attended our evening events despite a long hard day at the office!

The first event for 2016 will be a half day series of lectures on the Dental Management of Sleep Apnoea. Readers are encouraged to contact me at anishanilshah@gmail.com with any ideas or feedback.

*Merry Christmas and a Happy New Year to all!*



(FROM LEFT) MR GREG CRANE, PROFESSOR CAMILE FARAH, HEAD OF THE SCHOOL OF DENTISTRY AND DIRECTOR OF THE ORAL HEALTH CENTRE OF WA, AND MR ASHLEY HEUCHAN OF ORASCOPE WITH THE LOUPES IN THE BACKGROUND.

# Streamlining dental screening

On the first morning of a revamped, streamlined screening clinic for public orthodontic patients, 150 people were seen by volunteer dentists and students.

The patients, mainly children, were attending a clinic set up and run by **Dr Mithran Goonewardene**, Orthodontics Program Director in the School of Dentistry and the Oral Health Centre of Western Australia (OHCWA).

He had the assistance of four orthodontics trainees and two fifth-year dentistry students who gave up their Saturday morning to help (see story below). An orthodontic nurse agreed to be rostered on.

Before Dr Goonewardene set up the original weekend screening clinic years ago, a limited number of patients could be seen each week and the waiting list was long.

“Patients were often on a treatment list and would wait three years to see us and sometimes some pathology had been left festering, with things going wrong,” he said. “The other problem was that patients were sent to us who didn’t need treatment. They could have gone privately. The government has very strict criteria about what we treat so we would have to face a hostile patient and parent, after three years of waiting, to find they could have gone elsewhere and had it done three years ago.”

So Dr Goonewardene set up the screening clinics, giving his time voluntarily on Saturdays every 6-8 weeks to run it. It operated for years before it was closed due to a lack of funds. This prompted Dr Goonewardene to revamp the running of it and trim it, reducing



JOSIE BIRCH IS SCREENED IN THE SATURDAY CLINIC BY DR MITHRAN GOONEWARDENE (CENTRE) AND TWO DENTISTRY STUDENTS

the number of nurses from six to one and receptionists from two to one.

The new model clinic, which opened on October 10 after a hiatus of 10 months, will be held every six weeks and screen well over 1,000 patients in a year. Dr Goonewardene said the clinic was operating much more efficiently now. “We are running ahead of time, and the admin is simpler, it’s amazing” he said.

Another bonus is that the volunteer dental students gain a wider experience, seeing young children and complex and unusual pathology, including cysts, severely decayed and jammed teeth, and tumours, he said. “And they see some of the challenges we face.”

School-age children are given priority over adults for screening. Patients are only considered for government-funded treatment if they have significant pathology.

In another move to streamline the system for patients, Dr Goonewardene runs a private clinic at OHCWA on Thursday afternoons for patients who need treatment but do not fit the criteria for free government-funded treatment. “They would have to go out into the private environment and pay \$6,000-8,000 to have their teeth fixed,” he said. “So we treat them for even less than the government rate.” This clinic is outside his contracted role but he ploughs the money back into OHCWA.

-By Cathy Saunders

## Wider exposure to patients

The students who volunteered to assist **Dr Mithran Goonewardene** in the OHCWA screening clinic all came away with valuable lessons.

They included three trainee orthodontists, all in their second year. Richard Lee, a UWA dentistry graduate, said the clinic gave the trainees a wide exposure to the types of cases that would be referred to them as practitioners.

“It is also acts as a triage system so it helps us to identify which are the key and more severe malocclusions that require urgent treatment and which ones can be deferred to a later stage, and also to identify those ones that require early management and how best to approach that,” he said.

“Being a government institution, funds cannot be allocated for everybody to have orthodontic treatment and there has to be an assessment of need. That is, as well, what this clinic is about - identifying those people who need treatment and ensuring that the funds that are available to us are well spent.”

Fabiana Petrykowski, who qualified in orthodontics in Brazil and is gaining extra training in the Doctor of Clinical Dentistry program in the UWA School of Dentistry, said the clinic enabled her to see diverse cases, particularly severe malocclusions which were her special interest.

“When cases are very challenging, you want to be treating them in this environment because there are professors here who

are so experienced,” she said. “When we go out to work later, we will have the most difficult malocclusions that are out there, so it prepares you well.”

Trainee orthodontist Steven Naoum, a UWA dentistry graduate who has a PhD in dental materials from Sydney University, said he hoped to use his skills in orthodontics and teaching in remote and rural Aboriginal communities.

Yu Ling Chang and Chen-Hong Liao, fifth-year dental students who joined the School in third year from Malaysia, also volunteered for the clinic.

Chen-Hong said they had screened a lot of young children, which they seldom did during the weekday clinic.

In the 12 months since he took up the newly-created role of Chair and Winthrop Professor of Child and Adolescent Psychiatry in The University of WA, Dr Florian Zepf has enjoyed several early successes.

Already medical students are knocking at his door asking about research opportunities and the first projects are about to commence.

He has also teed up a student exchange program with Germany, which will allow several UWA Doctor of Medicine (MD) students undertake clinical placements at RWTH Aachen University, where he previously worked. In return, students from Aachen will come to UWA, with one student already having taken up the option.

Furthermore, Professor Zepf has arranged for final year MD students to have the chance to undertake a five-week placement with community Child and Adolescent Mental Health Services (CAMHS) to give them more clinical exposure. The specialised rotation will begin next year and ties in nicely with Professor Zepf's other major role, which is Clinical Director/ Head of Department of Specialised CAMHS in WA.



WINTHROP PROFESSOR FLORIAN ZEPF

with tic disorders such as Tourette's syndrome - and the professor has already been granted Telethon Kids Institute funding to study this novel application.

Professor Zepf is particularly interested in non-pharmacological and non-invasive treatment options for attention disorders and says neurofeedback is a good example of such an approach.

He is also keen to look deeper into diet and how it can impact on processes in the brain that are related to mental health, particularly in mood and attention disorders. He has secured a grant from the Telethon-Perth Children's Hospital Research Fund to study the use of a dietary technique to predict treatment response to anti-depressants.

Other research he is considering will use data from the famous Raine Study, looking at longitudinal aspects of psychopathology and how emotional dysregulation possibly may develop over time. It will focus on Disruptive Mood Dysregulation Disorder (DMDD) - a new diagnosis in the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) - which is characterised by chronic irritability and severe and recurrent temper outbursts. A study into potential genetic components of the disorder is the basis of other proposed research.

His research interests also include eating disorders, autism spectrum disorders and self-harming behaviours.

He likes to employ different scientific methods, including MRI. "It is probably not suitable for routine use in daily psychiatric practice but it can definitely tell us something about the underlying biological mechanisms and functions of the brain in patients with different psychiatric disorders," he said.

Professor Zepf, who undertook his medical degrees in Germany and then worked as a consultant child and adolescent psychiatrist there, has won many prestigious international awards.

-By Cathy Saunders

## Putting *child* and *adolescent* psychiatry high on the agenda

These developments are gratifying to Professor Zepf, particularly because one of his key objectives in his university role is to inspire medical students to consider Child and Adolescent Psychiatry as a future career path. He also hopes to make them more aware of it as a medical discipline. "I'd like to promote how science-driven it is," he said. Indeed, lectures in the discipline now form part of the new post-graduate MD curriculum.

Professor Zepf, whose role spans the School of Psychiatry and Clinical Neurosciences and the School of Paediatrics and Child Health, plans to bring clinicians on board to conduct research. Many practising child and adolescent psychiatrists have already shown keen interest and are collaborating in studies.

Professor Zepf said one research opportunity is in the field of neurofeedback, a form of biofeedback.

"You capture brain activity in real time with an EEG signal and you present that signal back to the patients on a monitor," he explained. "They don't see the classical brain waves but they see a visual surrogate of it. It could be an aeroplane and they would have the task to make the aeroplane fly up and down, which involves concentration and relaxing.

"It is an approach where we can teach young people to regulate their own brain activity. It is supposed to help with ADHD problems." Neurofeedback can also be seen as a possible future therapeutic option for patients

THE TRAINEE ORTHODONTISTS WHO VOLUNTEERED FOR THE SATURDAY SCREENING CLINIC WITH DR MITHRAN GOONEWARDENE (RIGHT).

Yu Ling said they saw unusual pathologies. "And because next year we are starting to practise in private, it's good that we see patients and see what are the criteria for us to refer to the orthodontist," she said.

Kavindi Karunanayake, a Sri Lankan-trained orthodontist who is at UWA to obtain the requisite year of overseas experience before returning home, said the screening clinic had been very useful.

"Rather than gaining the experience in my own country, it is really helpful for me to do the new techniques and new technologies," she said. "In my country I basically work with just one orthodontist but here I have exposure to, I think, 12 orthodontists."



# Going into *bat* for brain cancer research

The loss of a loved one to a brain tumour has galvanised several West Australians into making passionate efforts to raise awareness of the disease and funds for research.

Twenty-year-old Caris Graham was only 12 years old when her father, Troy, was diagnosed with glioblastoma. After battling the cancer for four years and undergoing seven operations, her father passed away in 2012. Since then, Caris and her aunt, Mrs Suzanne Bennett, have been fundraising for University of WA research. Caris's mother, Mrs Kim Graham, has attended the fundraising events.

The family presented a cheque in August for almost \$13,000 to Mr Graham's oncologist, Professor Anna Nowak, of the School of Medicine and Pharmacology, and Dr Foteini Kakulas, Research Fellow in the School of Chemistry and Biochemistry, to help further their studies into brain tumours (see story on opposite page).

The money was raised by two "Bus Trip to Nowhere" events, the first in 2014 that was a day trip from Mandurah to the Ferguson Valley, and the second that was an overnighter this year staying in chalets in Augusta.

The family had already presented Professor Nowak with a cheque for \$2,000, raised during their first event which was a "Day on the Green" picnic with live music at Mrs Bennett's large garden in Dawesville in 2013.

Caris said all the events had been a lot of fun, with a lot of prize donations by local businesses, and the next one was planned for March.

Mrs Diana Andrew, whose husband Jeffrey passed away in March from a high-grade brain tumour (glioblastoma) at 51 years of age after a traumatic five months of sudden illness, believes in national and strategic efforts to raise awareness about brain cancer and encourage medical and scientific research directed at improved treatment.



*GENEROSITY: (FROM LEFT) MS SUZANNE BENNETT, MS CARIS GRAHAM AND (FAR RIGHT) MRS KIM GRAHAM PRESENT A CHEQUE FOR ALMOST \$13,000 TO PROFESSOR ANNA NOWAK AND DR FOTEINI KAKULAS TO BROADEN THEIR RESOURCES FOR BRAIN TUMOUR RESEARCH.*

She will support collaborative medical research groups, such as COGNO (Cooperative Trials Group for Neuro-Oncology), that are aimed at tackling the devastating disease.

She has taken a break from work and volunteers her time to do administrative work for Professor Nowak for one or two days a week at the Harry Perkins Institute of Medical Research. "Professor Nowak gives so much to the brain cancer community and is a globally recognised medical researcher so offering her any level of support is a privilege," Diana said.

At a national level, she advocates more streamlined brain cancer biobanking and is a committee member of Brain Tumour Alliance Australia. "Since being utterly powerless to help Jeff as he battled so bravely through a terminal diagnosis, I am now driven to support medical and scientific research professionals who are working tirelessly with their peers internationally to bring hope that currently

dismal survival rates from brain cancer will in time be in line with more treatable cancers," she said.

The Brain Tumour Association of WA (BTAWA) was set up eight years ago by a group of people who were personally affected by losing or living with a family member with brain tumour.

While they are predominantly a support group for people diagnosed with brain cancer, their carers and families, they also direct fundraising money and donations to Professor Nowak to further research.

Committee members Michael and Shirley Hawker, whose son Tim, aged 40, died last year 10 years after being diagnosed with a slow-growing tumour, continue to hold a monthly support meeting. "We care compassionately for others in the same circumstances," Mrs Hawker said.

"There is a need for more friends of BTAWA to join the committee so that we can accomplish more."



*GOING NOWHERE - AND LOVING IT. ONE OF THE FUNDRAISING BUS TRIPS FOR BRAIN CANCER RESEARCH.*



## Tackling *brain cancer* on several fronts

Finding ways of making the lives of patients with brain cancer a little better is among the collaborative research projects being undertaken by medical oncologist **Professor Anna Nowak**, of the School of Medicine and Pharmacology.

Some of her work is made possible by generous fundraising carried out by the families of patients she has treated (see story opposite page).

One study is looking at whether prescribed exercise three times a week can improve the lives of patients with glioma who are undergoing chemotherapy and radiotherapy.

Another study, in conjunction with Dr Foteini Kakulas, Research Fellow in the School of Chemistry and Biochemistry, is focusing on why cancer stem cells may persist and be able to reform a tumour even after aggressive treatment.

Professor Nowak said a brain tumour diagnosis was traumatic. "With many other cancer diagnoses there is a prospect of cure for some people and a lot of effective treatments," she said. "But the brain cancers I treat are almost invariably fatal and people also lose themselves because it affects cognition and personality."

Professor Nowak focuses on glioblastomas, which are among the most aggressive brain tumours, with the average life span after diagnosis being 12-15 months. Patients range



PROFESSOR ANNA NOWAK AND MR MICHAEL HAWKER.

PHOTO KINDLY SUPPLIED BY MRS DIANA ANDREW.

in age from adolescence to over 90 years, with many aged under 40 years.

The cause of brain cancer is unknown. Treatment includes surgery, chemotherapy and radiotherapy.

Unfortunately, research into brain cancer is under-resourced and under-funded, which is why fundraising by the community is so important and helpful, Professor Nowak said. "Because I both treat these people and do research, and there aren't a lot of other avenues to donate, many of my patients and their families have decided to specifically support the work I do on the 'Donation to a named individual researcher' basis," she explained.

The donations are important seed funding for projects to generate enough pilot data for her group to be competitive when applying for grants in new areas and to provide consumables for a PhD student.

The funds raised also go towards supporting an Australian bio-bank of 1,000 samples of tissue and serum collected from people with high-grade glioma. "We've got the samples but we have still got to continue to follow up our patients and get details of their treatment, dates of death and also epidemiological information," Professor Nowak said. Known as Australian Genomics and Clinical Outcomes of Glioma (AGOG), it is a resource available to national and international researchers on application.

Professor Nowak said the most exciting new frontier in brain cancer is probably the potential to use immunotherapy.

## Digital 3D radiology

### arrives at the School of Dentistry

*continued from page 1*

Professor Farah said. "This will allow us to do more detailed assessments of our patients. It has significant advantages for teaching, research and of course clinical practice, with benefits for all patients we serve at OHCWA.

"It is very important strategically for the School moving forward because we want to introduce technology that is commonly used in dentistry and we want our graduates to be experiencing contemporary dental practice.

"Obviously it is very important for the patients who come to the School to receive the best care and their care is compromised if they can't, for example, get an accurate scan." Professor Farah said dentists carrying out implants, wisdom teeth extraction, or looking for bone pathology, would benefit from using the CBCT scanner.

The collaboration with Henry Schein Halas is the vision of Professor Farah, who built up a good working relationship with the company before he moved to the School and was well aware of the philanthropic work carried out by its charitable arm, the Henry Schein Cares Foundation.

When he took up his role at the School at the beginning of this year, he wanted to modernise its facilities and equipment. "OHCWA was built in 2002. The current radiology equipment is analog, not digital, which has made it cumbersome and costly, and has hindered full adoption of our digital patient management system replacing hardcopy patient charts and cards. Additionally, OPG radiographs are only two- and not three-dimensional."

Professor Farah said the Radiology Suite will include processing and reporting rooms, a seminar room for students on rotation, and a clinical area to screen all patients attending OHCWA. "The patients will be screened by our dentists, have their imaging done as required, and then move on to an appropriate clinic to have their dental work done," Professor Farah said. "Currently our services in this area are not streamlined and are not efficient and I am keen to remedy this with digital solutions such as the Radiology Suite. With this space and the generous gift from

Henry Schein Halas, we can centralise the triage, screening and imaging of patients all in one space."

The Suite will aid researchers in the School, particularly those looking at cranio-facial changes with orthodontic tooth movement and sleep apnoea studies and those doing implant research.

Professor Farah said the Henry Schein Halas gift was the first large donation from an industry partner to the School of Dentistry and he looked forward to a positive ongoing relationship with the industry partner and new opportunities for other collaborations.

Henry Schein Halas Managing Director Mr Mike Covey said he was excited about the new relationship with UWA and its School of Dentistry and saw the donation of the radiology equipment as one way of supporting dental education and the dental profession in WA.

# Driven but on track

Recently announced 2016 Rhodes Scholar **Andrés Noé** is juggling a lot of balls – but he says if he drops one, the others tend to follow.

So the 24-year-old prefers to keep his life balanced, tipping between his medical studies, pursuit of different sports, and his co-curricular interests.

“The thing I learnt in school is that success in any form feeds off success in other parts of your life,” he said. “I learnt that if I wanted to do well inside the classroom, I had to do well outside the classroom. And I found that you learn different things through different endeavours that eventually end up helping you for everything.”

A research conference he organised this year taught him organisational skills that he has implemented in his studies, his triathlon training schedule helps him with his exam preparation, and his knowledge of the human body aids his sports training.

Dr Noé is The University of WA's 101st Rhodes Scholar in 102 years and will head to Oxford University next year, having just completed a Bachelor of Medical Science and Surgery with Honours in obstetrics and gynaecology.

It was not until his final year at Christ Church Grammar School that he lit on his career choice. One of the main reasons for medicine is that he wants to help others. “My family background of Latin America and my parents coming to Australia to have a better environment to raise their children planted the seeds early that you do what you can for other people,” he explained. In addition, he was involved in service-focused activities throughout his secondary school years.

Towards the end of school his interest in the human body and his desire to help people began to gel and embarking on a medical degree was the result.

The numerous scholarships and prizes he has won as well as huge support from his family have made it possible for him to pursue his sports and studies, although he has also worked as a phlebotomist, research assistant, tutor, and in hospitality.

Being awarded the Women and Infants Research Foundation (WIRF) Professor Gordon King Bachelor of Medical Science (BMedSc) Scholarship enabled him to take a year off from his medical degree last year to complete a BMedSc, looking at pre-term birth prevention under the supervision of **Professor John Newnham** and **Dr Matthew Kemp** of the Faculty's School of Women's and Infants' Health.

“The research group that I got to be involved in is world class,” Dr Noé said. “It was good to be surrounded by people who are leading their field, and it was inspiring.”



*ANDRÉS NOÉ IN KRUGER NATIONAL PARK WHICH HE VISITED DURING HIS ELECTIVE PLACEMENT IN MOZAMBIQUE EARLIER THIS YEAR.*



*ANDRÉS NOÉ IN KARRATHA DURING HIS RURAL CLINICAL SCHOOL YEAR.*

He is a keen advocate of the BMedSc research year and recommends it “100 per cent”.

He also embarked on a Diploma in Modern Languages from UWA in 2011 in order to focus on things other than medicine. “I wanted to feel my brain thinking in different ways,” he said. His biggest regret in high school was dropping French so he resumed it.

His goal is to become a change-maker in paediatric public health and at Oxford he will undertake a Masters of International Health and Tropical Medicine, and a Masters of Public Policy.

His interest in paediatrics has sprung from his university years during which he has been involved in the WA Medical Students' Society, the Dr Yes program for youth, and Uni Camp for Kids. “I've realised if one invests in people in the formative stages of their life, you can effect long-lasting, substantial and broad change for the better,” he said.

His leaning toward public health resulted from his elective placements in Nepal in 2013/14 and in Mozambique early this year as well as from his year in Karratha with the Rural Clinical School in 2013. “I'd like to try and implement public health measures to improve the health and lives of the under-served populations,” he said. “You needn't look far - it is the Aboriginal and Torres Strait Islander populations, asylum seeker populations, children born to single parent families and homeless children.”

He intends to maintain his passion for the triathlon and possibly touch rugby at Oxford but his involvement in sailing will go into abeyance. He won gold medals in sailing in the Australian University Games in 2010 and 2013, competed in the Ironman 70.3 World Championship in Austria this year, and was part of the Australian Games Touch Rugby Squad in 2012.

-By Cathy Saunders



## Book launch marks 50th anniversary of Social Work

*By Mr Dief Alexander, School Manager,  
School of Population Health*

The launch of a history of the 50 years of Social Work at The University of WA was one of the highlights of a reunion celebrating the milestone anniversary.

The book, *Legacy & Promise*, also provides a glimpse into the future of Social Work and Social Policy at the University. Guests, who included Social Work graduates and current staff and students, received a complimentary copy.

The reunion, held at the University Club last month, was the culmination of events held this year to celebrate the 50th anniversary - a significant milestone not only for UWA, but also for social work in Western Australia.

Professor Maria Harries, the driving force behind the book, spoke about the outstanding contribution of Emeritus Professor Laksiri Jayasuriya to the discipline over many years. Emeritus Professor Jayasuriya was announced as the patron of the newly established Social Policy Practice and Research Consortium based at the School of Population Health, a significant development for social policy in WA. Professor Harries also acknowledged the support of Social Work administrative staff over the 50 years, all of whom were present.

The evening began with the Welcome to Country provided by current Social Work lecturer **Ms Glenda Kickett**. Social Work alumnae Libby Lloyd and Louise Durack provided entertaining speeches about their time as students in the past as well as what impact Social Work graduates can have in the community, while current student Olivia Kendall gave a moving talk about what her studies have meant to her.

Professor Colleen Fisher, Head of School of Population Health where Social Work is based, said a broad spectrum of Social Work graduates attended the reunion. "We had graduates attending who spanned most of the 50 years of the discipline, and some had travelled interstate to be there on the night. The buzz in the room was remarkable and it is always a pleasure to see former students catching up with fellow graduates and staff."

The leader of the Social Work group, Associate Professor Judy Esmond, summed up the evening well: "The reunion was a celebration of why social workers matter in the community, and the sense of friendship was evident in the amount of laughter during the night."

Copies of *Legacy & Promise* are available for purchase from the School of Population Health.



# Raising your external profile

In the last issue of MeDeFacts (September), ways you can use social media and UWA sites to increase your research profile were outlined. In this issue, the usefulness of various external sites is canvassed. See the box for details.

Why is it necessary to raise your external profile? It highlights and showcases your work to the world and potential collaborators, says the Medical and Dental Library's Acting Senior Librarian, Ms Karen Jones. It helps you track your citations and manage your publications list and distinguishes yourself from others if you have a more common name.

Currently the main players are Thomson Reuters/Web of Science ResearcherID, Elsevier's Scopus Author Identifier and a community-driven consortium (Open Researcher and Contributor ID) ORCID.

It is essential that researchers regularly update their researcher profiles on external websites and be aware of their shortcomings, says Ms Jones. For example, Thomson Reuters/Web of Science ResearcherID assigns you a unique ID to collate publications under your name but you do need to go in and manually enter and check the information. ResearcherID integrates with Web of Science and Endnote Online. The citation metrics generated is only for Web of Science documents. You can add non-Web of Science publications but this requires the researcher to enter the publication details and no citation metrics will be produced. You can link to/from your UWA public profile.

In Scopus Author Identifier, your profile is generated automatically. This is limited to publications in Scopus and the metrics generated is based on Scopus citations. Publications may be missed or the automated process may generate multiple profiles for one individual. This can be corrected but this is something researchers need to be aware of, Ms Jones says.

Scopus is probably the most comprehensive in the medical area, according to Ms Jones. It enables you to search scholarly journal articles by institution and map affiliations and has a tool which provides graphs on impact and citations.

But the problem with the impact factor is that it is based on the whole journal and not the individual articles, so a researcher may have research that is cited a lot less or more than its



MS KAREN JONES

given impact factor, Ms Jones says. "So a paper may have no citations but be in a scholarly journal with a high impact factor."

The h-index is a measurement that attempts to describe the scientific productivity and citation impact of a researcher. "The NHMRC does not like impact factors to be used and you can't use h-index either when putting in an application for a grant," Ms Jones says. "You can put in citations but even these are a bit dubious because some of your citations could be people putting in a letter to the editor saying this is a shoddy piece of research or they are self-citations, where you cite yourself on every single paper you ever publish. So they can be inflated as well."

Both ResearcherID and Scopus Author Identifier can integrate with ORCID and import your information. One of the pros for ORCID is a persistent researcher-specific identifier that can link across your entire research work flow from grant application to publication. It is non-profit community driven, has an open API (publicly available application programming interface, meaning it allows other applications to talk to each other and integrate seamlessly without any

user intervention), detailed privacy settings and provides space for a biography and place to list education and employment history.

Google Scholar also has pros and cons. "If you have a publication, Google Scholar will already have a profile for you set up which you can go into and manage," Ms Jones says. It provides a profile, citations and publications. But it is important to be aware the numbers can be quite inflated and should be considered in that light, she says.

Other sites include Academia, Mendeley, ResearchGate and The Conversation.

"ResearchGate is pretty much Facebook for research," Ms Jones says. "You can enter your areas of expertise. You can make connections with other researchers in your discipline area."

The Conversation, which is gaining traction among key opinion leaders, provides informed news analysis and commentary and aims to connect the university research sector with the public.

- **Google Scholar** (<http://scholar.google.com.au/>) - Google Scholar citations provide a simple way for authors to keep track of citations to their articles. You can check who is citing your publications, graph citations over time and compute several citation metrics. You can set your profile to private or public.
- **Thomson Reuters/Web of Science ResearcherID** (<http://www.researcherid.com/>) - Assigns you a unique ID to collate your publications in Web of Science and associated citation metrics. The UWA Deputy Vice-Chancellor (Research) recommends setting up your ID for the purpose of tracking research output at UWA. Your profile does not have to be publicly visible.
- **Scopus** (<http://www.scopus.com/>) - Scopus is a searchable database of scholarly journal articles. It allows you to search by institution and map affiliations. It also has a journal analyser tool which provides graphs on impact and citations. Users can set up a profile and receive notifications relevant to them.
- **ORCID (Open Researcher and Contributor ID; <http://orcid.org/>)** - ORCID provides you with a unique number that can be used on grant applications. ORCID cross populates information from your ResearcherID and Scopus profiles.
- **Academia.edu** (<https://www.academia.edu/>) - Social network for academics that allows you build a personal homepage, list and upload publications, and "follow" other members' work.
- **ResearchGate** (<http://www.researchgate.net/>) - A social network site that strives to be a repository for scholarly research articles. You can create a profile and make connections with other researchers in your discipline area.
- **The Conversation** (<http://theconversation.com/au/>) - The Conversation is an independent source of analysis, commentary and news that aims to connect the university research sector with the public. The site has increased exposure and readership among key opinion leaders, governments, academics and employers in Australia and overseas.
- **Mendeley** (<https://www.mendeley.com/>) - Mendeley is a social reference management site. You can use it to store your citations and help write your research papers and it also has some great social features.
- **FigShare** (<http://figshare.com/>) - Figshare is a repository where users can make all of their research outputs available.
- **Kudos** (<http://www.growkudos.com/>) - Kudos is a free service that helps to promote your research to a wider audience.
- **MethodSpace** (<http://www.methodspace.com/>) - A site for sharing your research ideas and communicating with other researchers.

## External websites

# Doing is learning

By fifth-year medical student Adrija Basu

Learning about leadership may be compared to learning how to ride a bicycle in that the best way to learn is to do. However, while leadership skills may be refined with experience and practice, effective coaching, mentorship and training are also fundamental in achieving excellence in this role. In a fast paced and rapidly evolving clinical environment, I have a profound appreciation for how imperative it is for doctors to build a sound capacity for leadership. For us to continue to deliver high quality healthcare, future doctors must be able to respectfully lead with knowledge, understanding and wisdom.

Therefore, as a fifth year medical student, it was a great privilege to attend the National Leadership Development Seminar (NLDS) conducted by Australian Medical Students' Association (AMSA). Held in our nation's capital in September, the NLDS was a five-day premier event that brought together 100 delegates from medical schools all around the country.

The seminar provided delegates with the opportunity to sharpen and refine their own leadership skills within both the clinical and wider community context. The primary focus of the seminar was surrounding the "Power of a Voice" with lectures, discussion

forums and workshops, allowing medical students to interact with a variety of world-class leaders including parliamentarians, NGO representatives, media personalities and clinical leaders. Notable speakers included Dr Brian Owlser (President of the Australian Medical Association), Dr Louis Peachy (Founding President of the Australian Indigenous Doctors' Association), Dr Ramona Salins (Medical Director for the Survivor reality TV show) and a sexual harassment panel with Dr John Quinn (Royal Australasian College of Surgeons (RACS) Surgical Affairs Executive Director) and Sydney senior vascular surgeon Dr Gabrielle McMullin. The seminar also saw more than 40 delegates meet their respective MPs to discuss advocacy issues and a spirited debate at Old Parliament House. Combined with the unique networking opportunities available over the course of a renowned four-night social program, the NLDS allowed us to communicate and engage with each other to discuss prospects for health reform.

The power of a single voice to revolutionise the way in which we view the world cannot



MS ADRIJA BASU

be underestimated. The NLDS refined my own leadership skills while inspiring me to think creatively to negotiate new solutions to the existing challenges we face as a community. Good leadership is about seeking diverse opinions to inform decision-making while placing community interest over personal agenda. Our responsibility as future doctors extends beyond our role as clinicians caring for individual patients and the NLDS provided me with the platform to advocate for and protect the rights of the wider community.

*Ms Basu received support from the Faculty for her attendance at the seminar.*

## Funding for *discovery*

Faculty researchers have successfully secured millions of dollars worth of Federal and local funding for research in the past couple of months and will study topics ranging from allergy prevention to language development.

Between them, two groups were awarded more than \$2.5 million from the National Health and Medical Research Council (NHMRC) last month.

**Professor Susan Prescott**, of the School of Paediatrics and Child Health (SPACH), received \$1.68 million to conduct a clinical trial investigating whether increased dietary fibre in pregnancy favourably influences metabolism and immune function and can prevent allergies in children.

Renowned burns specialist **Professor Fiona Wood**, of the Burn Injury Research Unit in the School of Surgery, was awarded a development grant of \$873,305 to create the first drug to remove scars which hopefully will be taken to clinical trials. Researchers have discovered a compound that targets collagen in the skin, preventing it from becoming too densely packed and instead more like normal skin.

Other individual NHMRC funding recipients were **Dr Christopher Blyth**, Clinical Professor Timothy Jones, and **Professor Karen Simmer**, all of SPACH, **Professor Carol Bower**, **Dr Thomas Snelling**, **Dr Brad Farrant**, **Dr Jenny Downs**, **Dr James Fitzpatrick** and **Dr Claire Waddington**, all of Telethon Kids Institute (TKI), **Associate Professor Wallace Langdon**, and **Professor Jiake Xu**, both of the School of Pathology and Laboratory Medicine (PaLM), **Professor Eric Moses**, of the Centre for Genetic Origins of Health and Disease (GOHaD), **Professor Bruce Robinson**, **Professor Trevor Mori** and **Professor Hugh Barrett**, all of the School of Medicine and Pharmacology (SMP), **Professor Vera Morgan**, of the School of Psychiatry and Clinical Neurosciences (SPCN), **Professor Peter Leedman** and **Professor Nigel Laing**, both of the Centre for Medical Research (CMR), and **Professor Mariapia Degli-Esposti**,

of the Centre for Ophthalmology and Visual Science.

In October, UWA overall was awarded \$17.8 million in the Australian Research Council's major grants. **Professor Andrew Whitehouse**, of TKI, and his team received \$415,000 for a Discovery Project to study how fetal hormone exposure and early brain growth support child language development. Their research will use neuro-imaging, endocrine and genetic techniques to track brain development from before birth to three years of age. **Dr Sarah Foster**, of the School of Population Health (SPH), was granted a Discovery Early Career Researcher Award of \$364,163 to look at higher density housing and the impact of policy guidance on building design criteria and residents' wellbeing.

Also in October, fellowships were awarded to three Faculty researchers who are studying the causes and impacts of dementia, which is now the second biggest cause of death in Australia after heart disease. Along with another UWA fellowship recipient, they were awarded a total of \$2.2 million in NHMRC and ARC funding.

The fellowships went to **Dr Kate Smith** and **Dr Sarah Rea**, both of CMR, and **Dr Andrew Ford**, of SPCN. Dr Smith, who will undertake her fellowship with the Centre for Aboriginal Medical and Dental Health, hopes to identify factors associated with a better quality of life for Aboriginals with dementia.

Dr Rea will look at how gene mutations in self-degrading cell receptors cause dementia. She hopes to provide new insights into common and underlying disease mechanisms that will lead to the development of future treatments.

Dr Ford will research factors contributing to the development of depression in adults with Alzheimer's disease. He will also look at whether cognitive bias modification (CBM) can prove to be a simple, safe and cost-effective treatment to prevent the development of depression and also improve the quality of life of people with Alzheimer's disease.

With local funding, a number of Faculty researchers were awarded grants by the Raine Medical Research Foundation at the end of last month.

Among the winners of six Priming Grants for the two-year period 2016-2017 were **Dr Gemma Cadby**, of GOHaD, who was awarded \$168,000 for her project: The association of sleep apnoea and long-term health outcomes in Western Australian adults, and **Dr Alison McDonnell**, of SMP, awarded \$150,330 for her project: Identifying immune biomarkers of response to chemotherapy in thoracic cancers.

The 2016 Strachan Memorial Prize was awarded to **Dr Rishi Kotecha**, of SPACH, for her publication: Meningiomas in children and adolescents: a meta-analysis of individual patient data. Dr Kotecha will also receive a \$5,000 travel grant.

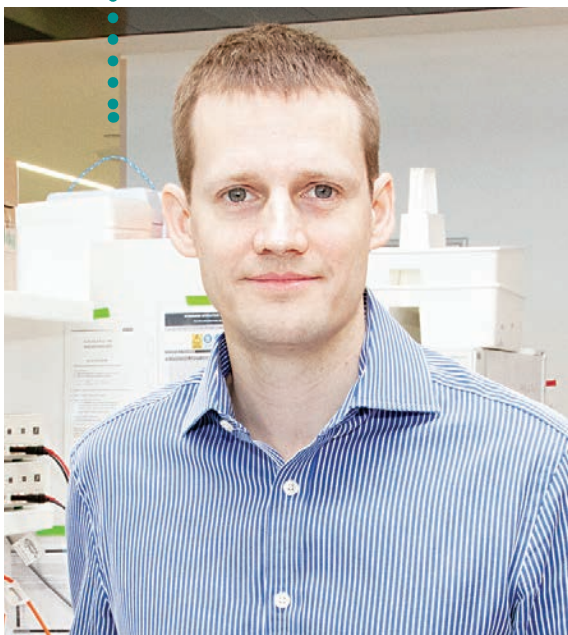
Three 2016 Healy Research Collaboration Awards of up to \$10,000 each were awarded, with one recipient being **Dr Aleksandra Debowski**, of PaLM, for her project: Development of an inducible *Helicobacter pylori* cag-T4SS system for in vitro and in vivo studies.

Four 2016 Cockell Research Collaboration Awards of up to \$15,000 each were awarded, recipients being **Dr Kevin Runions**, of TKI, for his project: Social Reward and Impulsivity in Disruptive Behaviour Problems: The Roles of Oxytocin and Serotonin; **Dr Anna Waterreus**, of SPCN, for her project: Simple Physical Activity Questionnaire (SIMPAQ)L and international validation study; and **Professor Andrew Whitehouse**, of TKI, for his project: Very early intervention in infants at risk of autism: Bringing a novel therapy to Australia.

# What's going on? in the Faculty

- The Vice Chancellor of UWA's Mid-Career Research Award has gone to renowned researcher Associate Professor Kevin Pflieger, Head of Molecular Endocrinology and Pharmacology at the Harry Perkins Institute of Medical Research, for his outstanding research.
- Perkins Director Professor Peter Leedman said Associate Professor Pflieger had an impressive history of innovation and he and his team were recognised worldwide for their development of technology understanding disease mechanisms at the molecular level. "His primary focus is currently a treatment for chronic kidney disease but he is also studying mechanisms underlying cardiovascular disease and cancer, as well as rare diseases," Professor Leedman said. The Vice Chancellor's award is also a recognition of Associate Professor Pflieger's contributions to the broader scientific community, including his extensive advocacy, mentoring and trans-disciplinary activities.

ASSOCIATE PROFESSOR KEVIN PFLEGER



More than 1000 cyclists pedalled to help raise \$4.5 million for the Harry Perkins Institute of Medical Research in the 2015 MACA Ride to Conquer Cancer in October. Teams rode 200kms over two days to support important cancer research. Professor Peter Leedman, Perkins Director, said the funds raised were already being put to use in the Perkins laboratories. "Several life-saving cancer research programs which include breast, prostate, melanoma, colon, head and neck, liver and leukaemia are underway," he said.

PROFESSOR PETER THOMPSON

Associate Professor Kevin Pflieger was also one of two eminent medical scientists at the Perkins who won National Health and Medical Research Council Research Excellence Awards for research to improve treatments for disease. He received his award for the highest ranked career development fellowship application in the biomedical category. His research aims to improve the effectiveness of current and future medicines while reducing their side effects. Perkins deputy director Professor Peter Thompson won the Marshall and Warren award for the most highly innovative and potentially transformative project grant application, which he will use for a study on patients with stable coronary heart disease. Professor Thompson and his team will conduct a trial with about 5,000 patients to follow up on the promising results of a smaller clinical trial to confirm whether a new use for an old drug widely used for gout, colchicine, can reduce heart attacks in patients.

Contributions to health and medical science through research, leadership, education, and service by five Faculty members have been acknowledged with their induction in October as new Fellows by the Australian Academy of Health and Medical Sciences. Professor Donna Cross, of the Telethon Kids Institute, Professor Wendy Erber, Head of the School of Pathology and Laboratory Medicine, Professor Peter Klinken, of the Harry Perkins Institute of Medical Research, and Professor Susan Prescott, of the School of Paediatrics and Child Health and Associate Director (Research) at the Telethon Kids Institute, were among 77 new Fellows. Professor Fiona Stanley, Distinguished Research Professor in the School of Paediatrics and Child Health, was inducted as an Honorary Fellow for her significant contributions to academic medicine in Australia and to the establishment of the Academy. Professor Cross is known worldwide for her work to improve the health and wellbeing of young people and developing school-based interventions, including the first anti-bullying initiative for schools. Professor Erber is a diagnostic haematologist with special interest in cellular haematology, particularly the integrated approach to the diagnosis and assessment of haematological malignancies. Chief Scientist of WA Professor Klinken played a key role in establishing the WA Institute for Medical Research, now called the Harry Perkins Institute of Medical Research, and is well known for his body of work, including advancing the understanding of genes involved in leukaemia, cancer and anaemia, and for the discovery of a gene that suppresses the growth of tumours. Paediatric allergist and immunologist Professor Prescott, Director of the World Allergy Organisation, has focused on early life risk factors for inflammation as a precursor to a broad range of non-communicable diseases, particularly allergic disease.

## POINTS TO PONDER

Does your grey matter need a kick start each day? Emeritus Professor Bernard Catchpole has posed a series of points to ponder that he suggests readers may like to contemplate as they clean their teeth in the morning.

Is there an evolutionary advantage for young men to become bald?



Nobel laureate Professor Barry Marshall has been honoured by his alma mater with having The University of WA Science Library renamed in his honour. The Barry J Marshall Library dedication in September celebrated the 10th anniversary of the awarding of the Nobel Prize in Physiology or Medicine to Professor Marshall and colleague Dr Robin Warren for their discovery of the bacterium *H. pylori* and its role in gastritis and peptic ulcer disease. As a result, most ulcers can now be cured with antibiotics and the incidence of gastric cancer has been significantly reduced.

Two Faculty staff members received grants from the Education Futures Scholarship Program, which enables staff to trial innovative teaching and learning practices. They are study lead Professor Paul Ichim, of the School of Dentistry, with team member Professor Camille Farah, for "A digital environment for clinical practice of dental students at UWA" and study lead Associate Professor Diana Jonas-Dwyer, of the Education Centre, with team members Assistant Professor Liza Seubert, Professor Sandra Carr, Associate Professor Christopher Etherton-Beer and Assistant Professor Andrew Knox for "Can point of view glasses build the bridge? Using technology to facilitate interprofessional learning."

Dr Archa Fox, of the Harry Perkins Institute of Medical Research, was co-researcher in an international group that has discovered a new connection between certain molecules and motor neuron disease (MND). They found a new link between the incurable disease and a tiny cellular structure, known as the paraspeckle, which is found within the nucleus of cells and was first identified by Dr Fox 13 years ago. The group's research article, "Prion-like domains in RNA binding proteins are essential for building subnuclear paraspeckles" was published in the *Journal of Cell Biology*. Dr Fox said the research, although at a very early stage, provided hope for people with neurodegenerative diseases and their families.

(FROM LEFT) PROFESSOR JOE HUNG, DR JUDITH KATZENELLENBOGEN AND DR MARIANNE WOOD, LIAISON GP FOR ABORIGINAL HEALTH AT ROYAL PERTH HOSPITAL.

A heart health forum that attracted more than 70 healthcare professionals has led to a call for a review of cardiac care services in the Pilbara. Hosted by the WA Centre for Rural Health (WACRH) and Rural Health West, the forum found local residents were receiving unacceptably low levels of care, largely because of a lack of resources and poor processes for cardiology support. The convenors were Dr Judith Katzenellenbogen and Research Fellow Ms Emma Haynes from WACRH. Cardiologist Professor Joe Hung, Honorary Research Fellow in the School of Medicine and Pharmacology, said access to essential specialist support services, diagnostic tests and basic diagnostic tools was limited and long-term follow up care for heart patients to prevent their condition worsening was also substantially under-funded in the Pilbara.



## What's going on? in the Faculty

Clinical Professor Harvey Coates, of Otolaryngology, Head and Neck Surgery, has been awarded one of the inaugural Royal Australasian College of Surgeons Indigenous Health Medals for his contributions to Aboriginal and Torres Strait Islander health. The medals are part of the College's efforts to celebrate individuals who are helping to close the gap in health outcomes for Maori and Aboriginal and Torres Strait Islander people.

A journal article by Miss Melanie Walls, of the School of Women's and Infants' Health, was judged to be the best publication in the Clinical Medicine and Dentistry discipline in prizes awarded by the Graduate Research School. The Higher Degree by Research Achievements initiative rewards research excellence at The University of Western Australia. The article, "In vitro maturation as an alternative to standard in vitro fertilisation for patients diagnosed with polycystic ovaries: a comparative analysis of fresh, frozen and cumulative cycle outcomes" appeared in *Human Reproduction*. Miss Walls received \$1000.

## WITS ABOUT YOU

(Answers page 16)

Our medical quiz is kindly supplied by Emeritus Professor Bernard Catchpole, the second Professor of Surgery appointed to the Faculty.

- 1 Which creatures have been referred to as biological weeds?
- 2 Many wild insect species are declining in Mexico. Why?
- 3 Why did so many men need urethral stricture dilation in the 1930-40's?
- 4 How many teaspoons of sugar might go into a can of cola?
- 5 Before a cannula is inserted into an upper limb vein, a question should be asked. What is it?

## the word is out - Faculty in the news Quoted as Saying

### The West Australian

Professor Christobel Saunders, Deputy Head of the School of Surgery, is QAS she wants the Federal Government to look at stronger laws against dangerous "quack cures". She was commenting on the fact that the WA Health Department was investigating a reported resurgence in the use of a dangerous, illegal balm by cancer patients, including women with breast cancer, as an alternative treatment. The unlicensed corrosive solvent known as black salve, red salve and cansema often has bloodroot plant extract and zinc chloride, which can eat at skin, causing significant scars. Professor Saunders, a breast surgeon, said she had seen five women who had used the salve on and off, including one who delayed legitimate cancer treatment. "I don't have a problem with complementary therapies that can help people through their treatment and improve their quality of life, but this is horrific stuff that can cause horrific burns," Professor Saunders said.

PROFESSOR CHRISTOBEL SAUNDERS



A half-hour breast cancer treatment has been listed on Medicare, thanks to unswerving efforts by leading breast cancer surgeon Professor Christobel Saunders, deputy head of the School of Surgery and consultant surgeon. The listing makes the innovative radiotherapy technique affordable for all eligible women. UWA research found that 30 minutes of in-theatre radiation using TARGIT (targeted intra-operative radiotherapy) could replace the more expensive and time-consuming six weeks' external beam radiotherapy, with fewer side effects. Results of the trial were published in 2014 in *The Lancet*. "We're delighted to see good evidence-based research translated into policy for the benefit of so many women, and at times, in the face of some fierce opposition," Professor Saunders said. Consultant radiation oncologist Clinical Professor David Joseph, of the School of Surgery and co-chairman of the TARGIT steering committee, said the Medicare-subsidised treatment would also mean reduced waiting lists and substantial savings for health-care systems in which breast cancer may account for a third of the workload in radiotherapy departments.

Professor John Newnham, Head of the School of Women's and Infants' Health and Executive Director of the Women and Infants Research Foundation (WIRF) is QAS baby Archie Pinder is one of the success stories of a preterm birth prevention initiative, which aims to reduce the rate of premature births by 35 per cent over the next five years. It includes using a cervical suture in women such as Archie's mother, Ms Pinder, whose shortened cervix increased the risk of miscarriage or preterm labour, Professor Newnham said. Ms Pinder and husband Jonathan had lost nine babies, eight to miscarriages and one preterm baby at birth. Ms Pinder was one of the first patients of the new trial clinic run by WIRF at King Edward Memorial Hospital and specialising in preventing premature births. Archie was safely delivered by emergency caesarean at 37 weeks. "Preterm birth is the single largest cause of death and disability in children under the age of five in the developed world but we know that in many cases it is preventable," Professor Newnham said.



## Alumni get a taste of latest medicine

By Ms Milka Bukilic, of Development and Alumni Relations

A unique hands-on interactive medicine showcase, held as part of UWA's Research Week in September, proved to be a hit among our alumni.

In an exclusive interactive learning event, Health in Your Hands, experts from the Faculty of Medicine, Dentistry and Health Sciences shared some of their research secrets, providing much-needed health insights that are not easily available to the general population.

It was the first time the Faculty opened their world of medical research and invited alumni to come and experience it firsthand.

UWA researchers, Professor Wendy Erber, newly-elected Dean of Medicine, Dentistry and Health Sciences, and Professor Markus Schlaich, Dobney Chair in Clinical Research, shared intellectual riches from their Faculty in two separate workshops - How to beat heart attack and stroke, and Cancer: not a death sentence any more.

Listening to the two researchers unlock the secrets to preventing and curing diseases that

threaten our lives, alumni were able to get inside access to expert medical knowledge, including tips on how to better manage their health and prevent heart disease and blood-related illness, including cancer.

In addition to the expert talks, alumni were treated to tours of cutting edge research and teaching facilities, including the Translation Cancer Pathology Laboratory, the Next Generation Sequencing laboratory and the FA Hadley Pathology Museum.

The tours conducted by Faculty researchers, students and academics were well received and provided alumni and supporters with an opportunity to speak directly with researchers and students and get a feel for how medical solutions are generated, how UWA remains at the forefront of medical changes and how cutting-edge research is turned into practice.

While much of Professor Schlaich's presentation focused on the need to get on top of blood pressure, he gave examples of how rates of heart attacks and strokes increased in crisis situations. Professor Erber talked about new treatment options, cell therapy and personalised medicine as the

new frontier. Alumni even had their blood pressure checked by students - emphasising the importance of blood pressure monitoring.

The take home message was to take health in your hands and embrace the kind of steps needed to live a healthy life - seeing the bigger picture for better health.

As the Faculty portfolio evolves to keep pace with educational and medical developments and emerging technologies, such interactive initiatives are vital to raise the profile of research within the broader community and keep engagement going.

Engaging alumni and supporters in the calibre of research originating from the Faculty is something that is sure to continue.

### Answers to the quiz on page 15

- 1 Mice.
- 2 They are collected and sold as exotic foods. E.g. "chapulines"- fried grasshoppers. (a).
- 3 They had had poor treatment for gonorrhoea in the first World War or later in the pre-antibiotic era.
- 4 Up to nine. (b).
- 5 Is the patient right or left handed? A cannula inserted into the right hand of a similarly handed patient makes such activities as tooth cleaning and toiletry unnecessarily difficult.

(a) *The Guardian Weekly* p32, 26-7-13.

(b) *British Heart Foundation report in the Guardian Weekly* p15, 16-8-13.

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