



THE UNIVERSITY OF  
MELBOURNE

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# Dent-AL

ALUMNI NEWSLETTER

## Reunion Weekend

The Faculty of Medicine, Dentistry and Health Sciences is pleased to invite all alumni of the Melbourne Dental School to Reunion Weekend 2019, on Friday 29 and Saturday 30 November.

Reunion Weekend will be a wonderful chance for you to return to campus and catch up with colleagues and old friends from Melbourne Dental School. There will be public lectures, tours, social events and reunions on offer over the weekend.

Guests will be able to visit the Melbourne Dental School open house, see the latest exhibition from the Henry Forman Atkinson's collection (see over), or attend a CPD course. As part of Reunion Weekend, Melbourne Dental School will be running a two-part CPD course *Ceramic Restorations* on Thursday 28 and Friday 29 November. Find out more at [go.unimelb.edu.au/55xr](http://go.unimelb.edu.au/55xr).

To learn more about Reunion Weekend please visit [mdhs.unimelb.edu.au/visit/reunion](http://mdhs.unimelb.edu.au/visit/reunion). While you are there, please update your contact details to receive important updates about Reunion Weekend



*Virtual Reality Lab Open House.*



*Royal Melbourne Hospital Underground Tours.*



## ITI Education Week

In March 2019, the International Team for Implantology (ITI), Melbourne Dental School and Straumann, welcomed students to ITI Education week. Students gained insight into implant dentistry through live surgical and restorative procedures, hands-on sessions, discussions of patient-centred care, lectures and case studies. Topics covered included new technologies for digital planning and impression techniques. Students also had the chance to meet our Dean, Professor Shitij Kapur.



Dr Fannie Gray examining a soldier's teeth, circa 1915, photograph and cardboard, 21.1 x 16.8 cm. Henry Forman Atkinson Dental Museum Collection.

## **Dentistry: Discovery, Education and Innovation: Uncovering the history of dentistry in Victoria**

This year we celebrate the 135th Anniversary of the establishment of the Odontological Society of Victoria in 1884, which brought about the development of the first dental school in the State. The organization consisted of a group of trained dentists and was modelled on the Odontological Society of Great Britain, established in 1856.

To mark the anniversary, the Henry Forman Atkinson Dental Museum will showcase a major exhibition and catalogue, *Dentistry: Discovery, Education and Innovation*. The development of dentistry practice, education and public health will be the focus of the exhibition. Objects from the Henry Forman Atkinson Dental Museum, Australian Dental Association, Victoria and other major dental collections including from the University of Utrecht in The Netherlands will be displayed.

The exhibition will highlight those who were prominent in progressing the professional practice of dentistry in Australia, including John Iliffe, who was integral to establishing the Odontological Society and the Dental Hospital, and Dr Fanny Gray (BDSc 1907), the first female graduate of the Faculty of Dental Science at the University of Melbourne in 1907.

The exhibition will include teaching objects from the Australian College of Dentistry, established in 1897 and affiliated with the University of Melbourne in a process that formalised dental education and further legitimised dental practice and research.

Developments in dentistry that impacted further scientific and medical practises will be explored, with a particular focus on anaesthesia, infection control, plastic surgery and forensics, such as the work of Dentists Horace Wells and William Morton, who discovered the breakthrough anaesthetics, nitrous oxide and ether, respectively, in the 19th century.

The Henry Forman Atkinson Dental Museum continues its commitment to partnering with Indigenous communities.

Two recently commissioned artworks on bark by Yolngu artist, Mulkun Wirrpanda, will be on view. These works depict the Dhuwa clan's tradition of throwing the newly lost baby teeth of children onto the roots of the Pandanus tree. The roots of this plant are equated with the reversed teeth of a shark. Throwing the baby teeth into the tree is understood to encourage new teeth to quickly grow strong and sharp. These works will be permanently housed in the foyer of the Melbourne Dental School.

In August 2018, over a thousand teeth were discovered in the Metro Tunnel excavation site next door to the historic Young and Jackson pub. Orthodontist Mark Evans was involved in determining that these teeth,

all displaying severe decay, were extracted using a method equivalent to dental avulsion. The teeth were then, most likely, disposed of down the drain at the former dental rooms on the site.

The discovery provides insight into the early dental profession in Australia. John James Forster, was identified as the extractor. He practised at number 11 Swanston Street from 1889 to his death in 1924 and built his renown partly through advertising that he could remove teeth without pain. This was a strong claim for the day when anaesthesia was still reliant on volatile anaesthetics. Forster was registered on May 3, 1888, a year before the Victorian Dentists Law Amendment Act passed in 1898.

J.J. Forster's practice and the exhumed teeth belong to a transformative era when dentistry made rapid advances in conservative and preventative treatments.

This exciting discovery will be part of the exhibition. Prominent dentists and historians will be invited to contribute to the accompanying publication which will be launched in 2020.

**For enquiries please contact  
mhm-info@unimelb.edu.au**

**Dentistry: Discovery, Education and Innovation will open in late 2019  
at the Medical History Museum, Level 2, Brownless Biomedical Library.**



## Cambodia through the eyes of a dental student

In December of last year, eleven Doctor of Dental Surgery students travelled to Phnom Penh, Cambodia, to volunteer their time in impoverished communities. Student William Hong reflects on the experience.

On our first day of volunteering, we took an early bus ride to our local clinic, which was set up in a temporary location at Kdey Takoy Primary School. A small room contained five chairs, one compressor for handpiece drills and no vacuum suction.

Over orientation, we learned that the clinic would be focussed on preventative and atraumatic dentistry, to prevent dental disease such as caries (dental decay) and periodontitis before they occur. Due to the clinic's limited resources, the procedures we could undertake were restricted.

We focussed on oral hygiene instruction (with the help of a translator), remineralisation using silver diamine fluoride, fissure sealants, atraumatic restorative technique (i.e. the use of hand instruments to restore broken down teeth), and extraction of unrestorable teeth.

Although we were advised of the high Decayed-Missing-Filled Teeth (DMFT) index in the area, nothing could truly prepare us for what we saw.

Cambodia is a developing nation with a high poverty rate. Our patients were children between six and 12 years of age. For the majority of these children, at least half of their deciduous teeth were heavily broken down with caries, most to a point beyond repair. Typically, the first permanent molar erupts at six years old. We saw seven and eight-year-olds with large holes in teeth that are meant to last a lifetime.

Just 5 metres from our clinic, there was a make-shift canteen, housed under big tarps, selling snacks, sweets, and soft drinks, and there was no shortage of customers. This is typical in the hundreds of schools in the area.

Talking to the locals, we learned that conditions are improving in the main city centres, such as central Phnom Penh, but there still is a lot to be done. We talked to a family of five who had a single worn down toothbrush to share between them.

We spent one day at Correction Centre One, for criminal offenders. On arrival, we went through multiple security checks before we could enter the makeshift clinic. Setting up took an hour as we transformed a spare office into a functional surgery with six chairs. Dental work could only be completed during the prisoner's free period. We performed preventative oral hygiene instruction, restorations, and extractions.

The trip was incredibly fulfilling. I felt a huge sense of accomplishment aiding a community where oral health hasn't been a priority in the past. I hope our efforts initiate a greater focus on oral health and preventative dentistry in these communities, moving forward. The trip has reaffirmed my purpose in dentistry and will ensure I stay true to why I chose this profession – to help others. Beyond my studies, this humbling experience has reinforced my philosophy and will help me deliver greater patient care throughout my career.

## World first discovery at the Melbourne Dental School: *Porphyromonas gingivalis* and Alzheimer's Disease

In 2009, Dr Glenn Walker (BDS Sc 1982, MDS Sc 1990, PhD 2001) and Laureate Professor Eric Reynolds AO (BSC Hons 1972, PhD 1978) demonstrated that proteases called gingipains of the periodontal pathogen *Porphyromonas gingivalis* penetrated the gingival tissue of patients at sites of severe periodontitis. The gingipains were localised by intense immunostaining to areas of severe disruption of tissue architecture. The work was published in the US journal *Infection and Immunity* in March 2009.

Professor Stephen Dominy, affiliate researcher at the University of California, San Francisco and Chief Scientific Officer of Cortexyme, an organisation leading in developing treatments for Alzheimer's, read the publication and contacted Professor Reynolds as he saw similarities in the gross tissue disruption of periodontitis and AD.

This led to a collaboration in which Professor Dominy sent brain sections, healthy and AD afflicted, to Melbourne for Dr Walker and Professor Reynolds to look for the presence of the gingipains.

Using these brain sections and specific antibodies against the gingipains, the researchers demonstrated the presence of the gingipains in the hippocampus of the AD patients but not in the healthy controls. The hippocampus is a brain area important for memory.

These initial results resulted in a major collaborative multi-site research program involving the United States, New Zealand and Australia. The results of this research program confirmed the initial results obtained at the Melbourne Dental School and showed the presence of gingipains in

up to 96 per cent of brain sections of 54 AD patients. The research also demonstrated that in mice, oral infection with *P. gingivalis* resulted in gingipains in the brain and the classic histopathology of AD in humans.

This work was recently published in the prestigious journal *Science Advances*, with Dr Walker and Professor Reynolds as co-authors. The findings received extensive media coverage around the world. A New Scientist article published 30 January 2019 explained "We may finally know what causes Alzheimer's - and how to stop it."

Read more: <http://go.unimelb.edu.au/8rxr>



## Laureate Professor Eric Reynolds AO FICD FTSE FRACDS elected Vice President/President of IADR

In 2018, Laureate Professor Eric Reynolds AO was nominated for Vice President of the International Association for Dental Research (IADR) by its Executive. At the IADR Board meeting in mid-2018, three nominations were short-listed for election by the international members. Professor Reynolds was one of the three short-listed nominations from around the world.

An election was conducted in late 2018 and it was announced by IADR in late November that Professor Reynolds was successfully elected as the next Vice President/President of IADR. This is the first time that someone from the Australia and New Zealand Division of IADR has been elected as IADR President.

Professor Reynolds formally becomes Vice President at the next General Session of IADR in Vancouver, Canada in June 2019. He then becomes President Elect at the General Session of IADR in Washington DC in March 2020 and President of IADR at the meeting in Chengdu, China in June 2021.

As President, Professor Reynolds will preside over the 100th General Session of IADR in Atlanta, Georgia US in March 2022.

It is interesting to note that IADR was established by a biochemist, William Gies, who was a passionate dental researcher. William Gies went on to co-found the dental school at Columbia, the IADR and the Journal of Dental Research.

William Gies was a strong advocate for a scientific, research-based approach to dentistry. In the Journal of Dental Research in 1919 he wrote, "Research in its highest expression is open-minded inquiry for truth, to be found and revealed unreservedly for the information, instruction, advantage and welfare of all. Research is war on the autocracy of ignorance." William Gies also served a term as President of IADR, hence there are some similarities between William J Gies and Professor Reynolds, with a shared passion for dental research, 100 years apart.

YOU CAN HELP

TURN AMBITION

INTO ACHIEVEMENT

## No student should miss out on the chance to learn at the Melbourne Dental School due to financial difficulty.

Yet, at a time of rising education costs, many dentistry students are finding it increasingly hard to prioritise their studies and reach their full potential.

On top of course fees, students need to pay for study expenses such as textbooks, computers and printing, and dental equipment. Accommodation and living expenses also need to be factored in as part of the cost of study.

A difficult personal situation should not prevent anyone from completing a University of Melbourne education, yet every year we see talented students disadvantaged by circumstances beyond their control.

Your support will provide current and future students every opportunity to succeed. Your donation today can be a life-transforming gift to enable students to turn ambition into achievement.

## THE IMPACT OF YOUR SUPPORT

When I learned I was the recipient of a dental scholarship, I felt immense relief about my academic and financial future.

I currently live at home with my parents and two sisters, where money is a frequent cause of stress. We often have to make sacrifices to make ends meet.

In my third year of the Doctor of Dental Surgery, this scholarship helped me fund my travel, education and equipment costs.

I have been able to comfortably pay for my Myki fares, which have allowed me to travel to class. It also allowed me to make extra trips to the library on weekends where I can access the University's resources and facilities including textbooks, journals and quiet study spaces.

The scholarship has also enabled me to take advantage of extra clinical sessions held at the Royal Dental Hospital of Melbourne and the Melbourne Dental Clinic during the

winter and summer breaks. These sessions were a fantastic opportunity for me to provide extra patient care to the community and improve my clinical skills.

Thanks to the scholarship, I have invested in dental equipment, such as a pair of dental loupes and a headlight. The equipment has helped me achieve a higher quality of work and improve my ergonomics – a true benefit for me now and in the future.

Not only has the scholarship assisted me financially, but it has also enabled me to make the most of my education, thereby setting me up well for my future career. I really appreciate the generosity that made this scholarship possible and I hope that

one day I can give back to the community in the same way.



### CATHLEEN PHO

Third year Doctor of Dental Surgery student

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