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CRC for OHS Cooperative Research Centre for Oral Health Science

Australian dental health set to improve with \$31.6m funding boost.
MEDIA RELEASE Friday 7 August 2009

Australians will benefit from improved dental health due to the \$31.6m funding for a new Oral Health Cooperative Research Centre, Federal Minister for Innovation, Industry, Science and Research, The Hon Kim Carr announced recently.

The new CRC, to be based at The University of Melbourne, will further the work of the existing CRC for Oral Health Science on the discovery and development of new preventive products and treatments for oral diseases such as caries (dental decay) and periodontitis (gum disease) which currently cost Australians some \$6 billion a year.

Anti-decay technology developed within the current CRC is already being used in food and drink and oral care products around the world.

“This really is an investment in Australia’s reputation as a world-leader in oral health research. The contributions by government and the CRC collaborators will result in substantial benefits to Australia both by reducing the burden of oral disease and in developing world-first knowledge and intellectual property,” says the CEO of the new Oral Health CRC and Head of Melbourne Dental School at the University of Melbourne, Professor Eric Reynolds AO.

Professor Reynolds says unlike many disease groups, oral diseases are mostly preventable. Despite this, he says, one in four Australian adults have untreated dental decay and just less than one in three have moderate or severe cases of the gum disease, periodontitis. In addition, almost half of Australia’s six year-olds have cavities in their teeth. More than one million work days a year are lost through poor oral health.

“The research programs of the Oral Health CRC will focus on the prevention and early diagnosis of oral disease, and on the known links to systemic diseases such as diabetes, cardiovascular disease and cancer,” Professor Reynolds says.

The new CRC includes research and manufacturing partners from Australia and overseas.

The CRC and its partners will develop novel consumer and professional dental products to prevent and treat oral diseases including early diagnostic tools and a vaccine against periodontitis.

Professor Reynolds says the government funding will make it possible for the researchers to test and commercialise the current CRC’s recent scientific discoveries, as well as enabling investigation into frontier technologies for the regeneration of lost and damaged teeth. It will also support the development of a tooth safe logo to inform consumers of foods and beverages that are safe for teeth.

In addition, the CRC’s researchers will examine how dental workforce shortages can be alleviated, and how evidence-based oral health promotion campaigns can reduce the need for clinical treatment.

Major collaborators in the new CRC include the University of Melbourne, CSL Limited, Colgate Palmolive Pty Ltd, GC Australasia Dental Pty Ltd, Cadbury Enterprises Pty Ltd and Murray Goulburn Cooperative Limited.

Further information can be found at:
www.crsoralhealthscience.org.au

Pictured: Dr Vivian Tam conducting periodontal vaccine research at the Cooperative Research Centre for Oral Health Science.



A Word From the Head

ERIC REYNOLDS
HEAD, MELBOURNE DENTAL SCHOOL

The Melbourne Dental School has had a very successful 2008/2009 with the maintenance of its number one national ranking and the recent successful extension of its CRC for another nine years of commonwealth funding. The new Oral Health CRC will involve all the existing parties but will also bring in some new companies and internationally renowned researchers to produce an impressive multidisciplinary team approach to tackle the major challenges faced by Australians with the substantial economic and social burden of the oral diseases and disorders.

The Faculty of Medicine, Dentistry and Health Sciences at the University of Melbourne is undergoing a major structural change in 2009. Dentistry will remain an independent school reporting directly to the Dean of the new Faculty structure and will be one of four Graduate Schools. The Faculty restructure will provide the platform on which we will launch our new graduate-entry, four year professional degree the Doctor of Dental Surgery (DDS) in 2011. This year was the last intake of school leavers into the BDSc first year with unprecedented demand and record high first preferences and ENTERs for both the BDSc and BOH. The DDS will involve advanced clinical training, be research-led, evidence-based and produce graduates who will become the leaders of their profession. The DDS curriculum has been approved by the Faculty Academic Programs Committee and has now been submitted to Academic Board for approval. It will be submitted to the Australian Dental Council in early 2010 for accreditation.

The course for overseas trained dentists offered by Dental Health Services Victoria (DHSV) has been reconfigured into a Graduate Certificate in Clinical Dentistry offered jointly by the Melbourne Dental School and DHSV. The first cohort of students for this Graduate Certificate began the new program in January this year.

Right: Kate Jolly - BOH student.

Middle: Dr. Yuichi Kitasako, Dr. Nathan Cochrane, Prof Ikuko Morio, Dr. Matthew Hopcraft, Ms Su-yan Barrow, Dr. Jun Tsuruta.

Far right: Tsurumi Soji-ji Head monastery.



Japan Trip with Bachelor of Oral Health Students

By MS SU-YAN BARROW, RDH, MA, MPH
SECOND YEAR COORDINATOR
LECTURER IN DENTAL HYGIENE
BACHELOR ORAL HEALTH

The Melbourne Dental School has established long standing professional collaborations with Japanese educational and research institutions. To continue the relationship with Tokyo Medical and Dental University (TMDU) and Tsurumi University School of Dental Medicine (TUSDM) a delegation of BDS and BOH students lead by academics Drs Matt Hopcraft, Nathan Cochrane and Ms Su-yan Barrow travelled to Japan. During the 10 day visit, the groups had the opportunity to tour both Dental Schools and observe research facilities, private dental surgeries and the GC Corporation Research and Development facility.

The Melbourne Dental School students provided presentations to Dean Junji Tagami (TMDU), Dean, Professor Arai (TUSDM), and selected academics and students from each institution. The students presented an overview of their research projects, features of the Australian culture and the curriculum and scope of practice of Oral Health Therapist.

In Japan, the oral health therapy profession does not exist as restorations for children and adults are only provided by dentists. However, numerous Japanese educational institutions provide three and four year Bachelor programs in dental hygiene with varying length of clinical experiences. The practice of dental hygiene is limited in scope in comparison to the practice of dental hygiene in Australia. Although trained in procedures such as scaling, root planning, and the placement of pit and fissure sealants, most qualified dental hygienists in Japan work



as dental nurses and are not routinely providing dental hygiene preventive services. However, an emphasis is placed on dental health education and communication skills in the dental hygiene curriculum with the preparation of health education programs and educational materials. As in Australia, dental hygiene students in Japan are educated in radiology; however in Japan, only dentists are allowed to take radiographs on their patients. Unlike Australia, upon completion of the dental hygiene curriculum, graduates are required to pass a national dental hygiene examination in order to practice.

In Japan, ninety percent of dental hygienists work in private dental clinics, with other places of work including public or private hospitals, and health centers. Since the implementation of the Community Health Law in April 1997, a growing number of hygienists have also been placed in municipal health centres and facilities for the elderly across the country. As Japan has entered an era of low birth-rate and life expectancy is increasing, "lifelong dental health maintenance" is becoming an immediate concern among many in their pursuit of better quality of life. The national nursing care insurance system adopted in April 2000 is further increasing the demand and expectations on dental hygienists to help meet these needs.

During the visit Ms Barrow presented the Bachelor of Oral Health Therapy curriculum to Dr Yoshimasu, Director School of Oral Health Care Sciences Tsurumi Junior College and academics from the Tsurumi Junior College Dental Hygiene Program with the focus on curriculum comparisons. The goal of these meetings was to establish an exchange program between the Japanese dental hygiene programs and the Melbourne Dental School Bachelor of Oral Health program. The proposed exchange program will enable the Japanese dental hygiene students to enhance their clinical and cultural experiences.

A student's perspective

By SU-SEE YAN, 4TH YEAR BDSc STUDENT

We heard that while some of us were driving to Torquay to soak up the last few days of Melbourne sunshine this Easter, a select few were getting their kicks far far away - in Japan to be exact! What is this Exchange trip? Do you have to be a member of the super elite or on the Dean's list to get in on this? And more importantly, how much does it cost? In our pursuit of the dentally relevant, we hunted down these elusive students and arranged for an exclusive interview.

Over Easter, twelve of us participated in an overseas student exchange. Led by Drs Nathan Cochrane and Matthew Hopcraft, we ventured to Japan, the enigmatic land of pachinko and soy sauce kit-kats. On arrival, we spent the weekend touring Tokyo. Whether we were at Akihabara; the centre of high tech electronics, Harajuku to spot cos-play, or the magnificent Meiji Shrine, we were overwhelmed by the melting pot of sub-cultures that is Japan.

Japan is home to twenty nine Dental schools, twelve State and seventeen private. We visited Tokyo Medical and Dental University. The School's cutting edge technology and research (the University gave birth to the apex locator and super elastic archwires to name a few) was awe-inspiring. In addition, we stopped over at GC Corporation and were offered a preview into the workings of their Research and Development units in Yokohama. We were warmly welcomed by Tsurumi University, a private school founded by the Soji-ji Head monastery and built upon principles of Zen Buddhism with its campus built around the beautiful Shoji Temples. Nissin Dental Products Inc, global manufacturers of student dental models, also put on an impressive presentation for us.



Finally, we made a trip to a local private practice to observe the local professionals at work before partying it up with our new Japanese friends over sake, shochu and great food.

Why did you decide to do an overseas exchange?

Charlie (4th yr BDSc) – "I've never been overseas before and I've always wanted to visit Japan! Also, we had some Japanese Exchange Students visit Melbourne last year."

Su Wee (4th yr BDSc) – "Last year, a group of students from Tsurumi University spent some time at our dental school and I got to make friends with a few of them."

Charlie – "I kept in touch with some of them."

What did you expect to learn/gain from the experience?

Su Wee – "I expected to gain an appreciation for the similarities and differences in dental education between Victoria and Japan, acquire insight into the life of a dental student overseas, forge strong friendships with our Japanese counterparts and observe the intricacies of Japanese culture."

What were the major differences between the Japan Universities and Melbourne Uni?

Charlie – "There are too many dentists in Japan! This results in the government restricting the number of dentists. Students are required to sit for a National Board Exam before they graduate and it has a pass rate of 70 to 80%. It's really scary!"

Juri – "Yes, the culture in the Dental School is very different. Students are more stressed because of the lack of job security, they don't get much clinical experience at all due to lack of patients."

Charlie – "What else, oh the technology in the Dental School is fantastic!"

Su Wee – "Pre-Clinical technology is quite advanced as a variety of models are used in the mannequin including specialised models to practice LA technique, extractions, periodontal surgery and open and drain.

Even their anatomically correct acrylic teeth are adapted to different dental procedures!

Would you rate the experience Below/Meets/Above Expectation?

Su Wee, Charlie, Juri – "Definitely above expectations!"

Juri – "The hospitality we received there was overwhelming."

What was the most fun thing you did on the trip?

Su Wee – "The students of Tsurumi University held a farewell party for us on the last night."

Charlie – "The street bars, the eating, and KARAOKE!"

Juri – "Listening to Dr Cochrane sing his heart out"

What was the most important thing you learnt on the trip?

Juri – "We're very lucky to be in Melbourne and Melbourne University where we receive increased clinical exposure and job security for the future. We shouldn't take things for granted."

Charlie – "Getting to know the Japanese students and Melbourne students a lot better."

Su Wee – "It is very important to not become complacent and to continually learn in order to improve and provide the best treatment. Learn from the best and always strive for excellence."

Would you go again?

A resounding YES from all involved.

What final advice/tips can you offer to our readers wanting to go on an overseas exchange?

Juri – "Be open to people. Deal with conflicts. Be as organised as you can about accommodation and money!"

Charlie – "Exchanges are great opportunities for making friends and meeting people, especially if you're looking to specialise in the future."

Su Wee – "Approach everyone you meet with a sincere and humble desire to learn and they will reciprocate your attitude with patience and generosity."



Left: 'Carol, Martin and Stephen Tyas at the investiture ceremony for the Member of the Order of Australia, held at NSW Government House, Sydney.'

Below: Dr Sjakon Tahia, accompanied by his wife Shelley and daughter Nina and son Krisna with Professor Mike Morgan, in the Wylie Lecture Theatre. Photo in the background is Dr Tahia's mother and father.

Far left; left to right: Prof Eric Reynolds, Head of the Melbourne Dental School and the Cooperative Research Centre for Oral Health Science; Senator Kim Carr, Minister for Innovation, Industry, Science and Research; Dr Nathan Cochrane, recent PhD graduate and now Research Fellow in the Melbourne Dental School.

Awards and Promotions

The School is pleased to announce that **Dr Nathan Cochrane** has been awarded the Early Career Scientists Awards which was open to scientists working in Cooperative Research Centres (58 in Australia) who are completing or have completed their PhDs within the last 12 months.

Dr Cochrane was one of four finalists at the National Innovators Conference held in Canberra last month. He received a cash prize and certificate presented by the Minister for Innovation, Industry, Science and Research, Senator Kim Carr at an awards dinner held at Parliament House.

In addition to giving a fantastic presentation, Nathan has also undertaken a dozen media interviews in the last few months, promoting the research of the Dental School and the CRC-OHS and taking the opportunity to communicate some public oral health messages.

Nathan was also recently awarded the Chancellor's Prize for Excellence in the PhD Thesis. Four awards are made annually and the prize consists of a medal for desk display. Nathan's PhD was entitled "Remineralisation of mineral-deficient enamel using casein phosphopeptide stabilised amorphous calcium fluoride phosphate". Nathan is a Research Fellow in the Melbourne Dental School and continues to practice as a dentist.

Congratulations to Professor Martin Tyas who received a Member of the Order of Australia (AM) in the recent Queen's Birthday Honours List. Martin received the AM for service to dentistry and dental education, to the Australian Dental Association and the Royal Australasian College of Dental Surgeons and through the development of industry standards.



This is a fitting recognition of Martin's outstanding contributions to dentistry. Martin is seen pictured with his family at Government House to receive his Award.

Mr Kheng Tan has been awarded the Colgate Travel Prize at the recent IADR ANZ Conference in Wuhan, China. Kheng now goes on to compete for the Hatton Award at the International Conference in Barcelona. Congratulations also to Ms Elena Toh who was runner up. Ms Jennifer Lo, 4th Year BDS student came 2nd in the junior competition. This result is testament to the hard work and continued high quality of research being conducted by the students in the Melbourne Dental School and CRC for Oral Health Science.

Ivan Darby was elected President of the IADR ANZ.

Associate Professor Andrew Smith has left the Melbourne Dental School to take up the position of Head of the Dental School at the University of Western Australia. Professor John Clement is the new Head of Section for Oral Anatomy, Medicine and Surgery.

Dr Sjakon Tahia, the son of Dr Jean Tahia, recently visited the Melbourne Dental School for a tour of the Theatre which was named after his mother. Sjakon was accompanied by his wife and two children and was delighted to see the theatre and the plaque.

Editor's note: Dr Jean Falkner Tahija's family left a generous bequest to the Melbourne Dental School. Jean graduated from dentistry in 1941, the only woman in her class of twenty four. She lived in Indonesia following her marriage to Julius Tahija, a former war hero, senior government official and President of Caltex Oil in Indonesia.

Latrobe Valley Dental Initiative



Media Release

Access to dental services in Victoria's Gippsland region is about to improve thanks to a new website connecting oral health practitioners looking for short-term jobs with public and private dental practices.

Called dentalgaps.com.au, the project is the product of a collaborative effort made by the Gippsland Oral Health Consortium.

Led by the largest community health service provider in the Greater Gippsland Region – Latrobe Community Health Service (LCHS) – the initiative aims to strengthen partnerships between public and private sector dental service providers.

The Chief Executive of LCHS, Ben Leigh, who is also the Chairman of the Gippsland Oral Health Consortium says dentalgaps is an important development for the region.

"Dentalgaps is a fine example of how well groups can work together to find solutions for problems that exist in the community.

"It is a very positive step in the right direction, one that will make dental treatment more accessible, particularly for those who rely on the public system.

"I congratulate the consortium and all its members on a job well done," says Mr Leigh.

Currently, dental waiting times can be as long as two-and-a-half years; the main reason for this being there is a significant shortfall in the number of oral health professionals willing to work in rural areas. Even fewer are willing to spend time working in public dental agencies.

It is anticipated the new website will assist in addressing the shortfall of oral health practitioners in the region by providing effective and co-ordinated communication of short and long-term job vacancies.

The new website will assist with the recruitment and co-ordination of vacant dental positions within Gippsland. It provides a portal linking dental practices in Gippsland with oral health practitioners around Australia and abroad.

Professor Mike Morgan from The Melbourne Dental School at The University of Melbourne is pleased with the initiative that will this year provide many new opportunities for young graduate dentists to find solid employment in both public and private dental practices.

"So many of our young graduates will gladly take up the opportunity to work in Gippsland. What better way to start your career than with an opportunity to see the real world through the eyes of a public practice?"

"It's an opportunity that will stand them in extremely good stead," says Professor Morgan.

For more information, please contact Anna Pappalardo on landline (03) 9654 4480, mobile 0401 145 611 or email, anna@andrewsgroups.com.au

For more information or to register, visit www.dentalgaps.com.au

Symposium – Innovative Models of Oral Health Care for High Risk Populations



16th November 2009

The Cooperative Research Centre for Oral Health Science, The University of Melbourne (CRC-OHS) together with Dental Health Services Victoria (DHSV) is sponsoring its fourth symposium in Population Oral Health to address priority areas as established by the Australia's National Oral Health Plan 2004-2013.

The goal of the Fourth CRC-OHS symposium is to foster alliances and deliver strategies that public health practitioners can use to improve oral health and overall health in Australia. This year's theme will be: "Innovative models of oral health care for high risk populations".

This one-day symposium will be held on the November 16, 2009 from 9.00 am to 4.00 pm in the Jean Falkner Tahija Lecture Theatre, Melbourne Dental School, The University of Melbourne, Ground Floor, 720 Swanston Street, Carlton.

This event is suitable for oral health professionals, health and public health professionals, medical doctors, hospital and clinic directors, educators, public policy makers, students and to all others interested in rural health issues.

The Melbourne Dental School is an approved Educational Activity Provider under the Dental Practice Board of Victoria's Code of Practice on Continuing Professional Development (CDP). This symposium is credited for 5 hours.

We look forward to seeing you at the symposium.

For more information, please contact A/Prof. Rodrigo Mariño on (03) 9341 1558, or email: rmario@unimelb.edu.au, or see News and Events at: <http://www.crcoralhealthscience.org.au/> Registration details are available through the CRC website.



MASTER OF DENTAL SURGERY, MASTER OF DENTAL SCIENCE, DOCTOR OF PHILOSOPHY, DOCTOR OF DENTAL SCIENCE (HONORIS CAUSA), FELLOW IN DENTAL SURGERY ROYAL COLLEGE OF SURGEONS, FELLOW OF THE ROYAL COLLEGE OF PATHOLOGISTS, FELLOW OF THE FACULTY OF ORAL PATHOLOGY, ROYAL COLLEGE OF PATHOLOGISTS OF AUSTRALASIA, FELLOW ROYAL AUSTRALASIAN COLLEGE OF DENTAL SURGEONS (HONORIS CAUSA). MEMBER OF THE ORDER OF AUSTRALIA, FOR SERVICES TO DENTAL MEDICINE AND SURGERY AND TO EDUCATION.

VALE Peter Clarence Reade

23rd February 1930 – 2nd June 2009

By Dr Nandor Steidler

I was born in Australia, but my core is Austrian, with its attendant formality, and so to me he will always be "Prof", but this is meant in the most affectionate way.

At Prof's funeral recently, Dr Ian Chippendale reminded me of a barbeque at Prof's home in Bullengarook in January 1978, at which my wife Chee and I were also present. On so many occasions over the years, many of us have shared in the Reade family's hospitality, and have been touched in some way by their generosity.

I have known Prof since I arrived in Melbourne, my association with him going back to 1970, when I started as an undergraduate at The University of Melbourne. More particularly, I knew him since 1973 when I started to attend his oral medicine and oral surgery lectures. He was the "farmer professor", who regularly arrived late to our morning lectures, but who then impressed with a passion for, and deep understanding of, his subject. He did that better than most - he made us *want* to learn more.

Who was this energetic and energising Professor? What did he achieve?

To those who don't know his qualifications, they were: Master of Dental Surgery, Master of Dental Science, Doctor of Philosophy, Doctor of Dental Science (*honoris causa*), Fellow in Dental Surgery Royal College of Surgeons, Fellow of the Royal College of Pathologists, Fellow of the Faculty of Oral Pathology, Royal College of Pathologists of Australasia, Fellow Royal Australasian College of Dental Surgeons (*honoris causa*).

On the Queen's Birthday in 1994, he was made Member of the Order of Australia, for services to dental medicine and surgery and to education.

To me, Prof is "the Professor", my mentor, the one with whom it was worthwhile arguing an academic point because he could understand its importance, a keen fellow photographer and gardener, and most importantly, my dear friend.

What is a Professor? Oxford Dictionary indicates that the word 'professor' comes from the Latin 'profiteor', which means 'to declare or acknowledge openly'. From *profiteor* comes 'professor', meaning 'an authority'. The title crept in slowly, after the development of Universities in Bologna, Cordova, and Paris, then in Oxford and Cambridge. Some time later it became a qualification: a Masters degree indicating that a

person could teach a subject, and a professor was a step above this.

It was Prof who stood out as an example of what makes education in a University department different from other forms of education - academic learning rather than the

acquisition of skills required for a craft. In a way, learning the craft of thinking. Sometimes this can be a difficult concept to accept, in our outcome-based, standardised marking, market-oriented professional Cultural Revolution. There is a difference between training and education, and I hope that we do not lose that distinction.

He would say: "You know, Nandor, a Bachelor's degree just gives you a ticket to the University, and once you have a Masters degree, you are only just coming to grips with thinking in an organised way". He encouraged me to go on to a PhD.

When he first joined The University of Melbourne, he came fresh from a PhD in immunology and a research fellowship at Harvard University. He breathed life into a department that, up to that time, had provided a valuable service as a hospital department and training facility, but which was not really a University department in the true sense. He encouraged and cajoled. He led by doing, and in doing, Prof changed the Department.

In the Harveian Oration of 1971, Professor Leslie Witts of The University of Oxford explored the concept of "The Medical Professorial Unit". What he spoke about applies equally to oral medicine and surgery. He concluded that "I do not think that a University department of medicine can survive if it is no more than a random collection of virtuosi.

Someone has to stand in the middle to maintain the connections between the basic sciences and clinical practice, to interpret one clinical group to another, and to encourage innovation and promote change. This is the operational role of the professor of medicine and to carry it out successfully he needs a flexible medical professorial unit behind him".

Professor Reade was a worthy disciple and exponent of this philosophy, and the Faculty, The University of Melbourne, and indeed the wider community is the better for it. Programmes he introduced in the Department of Dental Medicine and Surgery during his time as Professor (1968 – 1992) included the introduction of the undergraduate subject of oral medicine.

He was instrumental in the introduction of an undergraduate research programme as a subject in the Bachelor of Dental Science degree course. He personally supervised 14 student groups, trying as always to get them thinking!

He introduced continuing education courses for postgraduate oral surgery and oral medicine/oral pathology, before such courses became a registration requirement and fashionable. He also established Masters degree courses for Oral and Maxillofacial Surgery, Oral Medicine/Oral Pathology, and Forensic Odontology.

The Master of Dental Science in oral surgery was subsequently expanded to the Master of Dental Science, Bachelor of Medicine and Bachelor of Surgery combined programme in oral and maxillofacial surgery. He developed a Doctor of Philosophy programme, and a postdoctoral programme and also mentored and supervised theses for two Doctors of Dental Science, eighteen Doctors of Philosophy, fifty two Masters of Dental Science, three Masters of Science, and two Masters of Physiotherapy.

His publications were numerous, measured in the hundreds. Now, this might have simply meant that he enjoyed writing or that he worked under the curse of "publish or perish", but this is not so. His research interests and contributions were leviathan in scope. His subjects ranged from immunology, to facial pain, temporomandibular joint disorders, craniofacial development, oral mucosal pathology, and to the oral health of villagers in Dharamsala in India.

We worked together on many of these, but primarily on epidermal growth factor, salivary gland physiology, oral cancer and carcinogenesis.

He was always "the Professor". A little while ago, we were discussing his illness and he said "You know how I had irradiation after the bowel resection? I then developed a sarcoma in the incision line. Radiation induced, I suppose. *Very interesting!*" Even just before he died, he told me how he was finding the sensations "at

the edge", as he described it, "very interesting". Always the scientist.

A scientist remains similar to a child, in that both see the wonder and amazement in all things.

Prof enjoyed travel and

photography; we enjoyed both together and have the photos to prove it! We went on numerous travels together, including various parts of the United States on a number of occasions, Japan, Hong Kong, Malaysia, Macau, India, even New Zealand! He was a great travelling companion, except for his extraordinary and infuriating skill in arriving late at the airport and then being put into first class because they ran out of seats in economy!

Somehow the flight attendants left the champagne bottle with him on more than one occasion as well.

When overseas, many famous people we met knew Prof. He was clearly welcome and respected in the many Universities we visited, including of course his own Harvard. We visited the Taj Mahal and various temples in India. Our cameras overheated, partly because of the weather, but mainly from overuse.

Prof wore shorts, and was promptly offered a length of cloth to wear around his waist to cover his knees. Always dignified? Certainly when appropriate, but he knew how to have fun.

I recall happy times in New Orleans, attending some arcane meeting, and then discussing and indeed *solving* the world's problems at Sloppy Jim's off Bourbon Street. They serve beer in frozen glasses there.

In India we walked every morning and evening through a small track of forest on our way to the hospital. The locals told us to watch out for bears - but how exactly do you watch out for bears? Two of the locals were attacked by bears just to prove to us that we needed to be careful. Point taken! We continued to watch for bears, had an audience with the Dalai Lama, and attended the Dalai Lama's brother's cremation in the forest at dawn in the Himalayan foothills. Unforgettable.

The trip to Dharamsala in India involved examining and treating primarily Tibetan refugees in that village, gaining the gratitude of the Dalai Lama, who lives there in exile. After this trip, Prof engaged in several excursions of similar nature, including to Vietnam, Indonesia and New Guinea, some under the auspices of Rotary.

He also travelled with mutual friend Dr Ross Bastiaan to lay plaques along the Kokoda Trail, as well as the Western Front, El Alamein, and Indonesia.

Prof was a keen and accomplished gardener. We especially shared a passion for trees. "Anything new in the garden, Prof?" "Yes, Nandor, come over here and see my *Sequoiaadendron giganteum!*"

"Magnificent tree, Prof, a giant in the making. I don't have room for one of those, but you must come and see my *Metasequoia glyptostroboides.*"

Then we would discuss the distribution, special characteristics and histories of these trees. Loads of fun, if you are that way inclined! One day at his farm "Hillview", Prof showed me his newly planted *Melia azederach* (also known as white cedar). My wife Chee and I have one in our garden, planted 16 years ago, and it is nicknamed the "Professorial tree".

Trees and gardens are earth's Eden, and they are planted for the next generation.

Above all, Prof was my friend. We talked about every subject imaginable. We shared thoughts. We agreed often, we argued sometimes. We shared a deep bond created from shared values. He was one of the most profound influences in my life, and a dear friend.

Thank you, Prof.

Magistrum nostrum laudamus.

from the Museum

1. 'George Washington' Full Denture, c1745-1800, 10.0 x 7.0 x 7.0 cm, reg. no. 266.
2. 'Crimean' Teeth, c1955, upper 6 wire mounted teeth to demonstrate how early natural teeth were prepared for the profession, 4.0 x 3.0 cm, reg. no. 830.
3. Bow Drill (replica), c1985, 50.0 x 3.0 x 4.0 cm, reg. no. 393.
4. Tube Teeth, Anataform Dentsply International Inc, c1900, 26.0 x 13.5 x 3.0 cm, reg. no. 393.
5. Borax Pot, C. Ash and Sons, c1910, 6.5 x 6.5 x 1.5 cm, reg. no. 405.
6. Bench Anvil, C. Ash and Sons, c1890-1930, 9.0 x 10.0 x 8.0 cm, reg. no. 406.
7. Riveting Hammer, C. Ash and Sons, c1890-1930, reg. no. 403.

The Dental Goldsmith

The making of a gold plate based denture

H.F. ATKINSON

In the last edition of "Dent-al" the ivory carving dentist was described fitting his patient with an example of the best appliances then available. A colleague in the same time frame of the 1700s, but a world away, Doctor Greenwood, Revolutionary Army Dentist, was treating Colonel George Washington, the future first President of the United States of America.

The techniques employed by Greenwood were entirely different from those of the ivory carver and were instead derived extensively from the craft of the goldsmith. The clinical assessment and treatment of both patients however would have been similar. (Image 1)

After obtaining a model of the patient's mouth, probably from a beeswax impression, Dr Greenwood would have commenced the fabrication of a denture with the cutting out of a horseshoe shaped pattern of the ridge in thin lead foil that had been adapted to the model. After trimming to a predetermined outline on the cast, the pattern was flattened and used to cut a similar shaped piece from an annealed sheet of gold alloy which was then bent, with the fingers, to fit as closely as possible to the cast.

Fine fitting was done, with frequent returns to the mouth, using pliers with beaks of various contours. Some workers preferred to build up a denture base using two thicknesses of thinner plate, later soldered together, claiming that this enabled a better fit to be achieved. Some also believed that a stronger plate resulted from the 'sandwich of gold, solder and gold'. Both upper and lower dentures were similar in shape because of, the lack of an understanding of the

principles of retention, which involved the necessity for full coverage, and the difficulties of adapting the plate to the double curvature of the alveolar ridge and palate. Another possible reason may have been the desire to save on the cost of gold.

The only replacement teeth available to a dentist at that time were human, obtained through 'an agent' or an early dental supply house that reputedly collected specimens by grave robbing or from casualties on battlefields. In Doctor Greenwood's case, skirmishes in the American Civil War were the most likely source of supply. (Image 2)

Once the fit of a base was considered satisfactory, selected anterior teeth were prepared by cutting to the required length with a saw. The pulp chamber was then cleaned out and the bow drill used to make a hole for a post, through the dentine and enamel, to appear in the cingulum. The reason for making the hole in this position was to prevent the end of the post from being seen as a dark 'cariou' spot when the patient opened the mouth. The drilling through dentine and enamel was no mean feat considering that the drill was hand operated, with the bit of carbon steel most probably made, sharpened and tempered by the dentist. (Image 3)

It was at this stage in the preparation that a plate worker was at a disadvantage to the ivory carver where the bulk of the block automatically replaced the loss in vertical height of both alveolar bone and tooth. With a plate, tissue loss in the anterior region was compensated for by keeping an acceptable incisor edge lip relationship through the use of a tooth with a long root. Hence, later tube teeth of porcelain were supplied with a root longer than the

crown, the cutting to length of which presented more problems. (Image 4)

With a foot pedal dental lathe the grinding of a porcelain tooth to size was intolerably slow. A much quicker method was developed in which a nick was made round the root at the required height with a small grinding wheel and the excess split off with one quick action of the special porcelain tooth cutting pliers. In the larger practices, a bench mounted tool with a similar action was used.

As would be done today the teeth were fitted to the plate, secured with wax and tried in the mouth. When satisfactory, a wire with a spot of pigment on the end was passed down each tooth to mark the position of the hole for the post which was drilled as before and, if necessary, enlarged with a tapered brooch. A length of post-wire was filed to a long, 10 to 15 mm triangular point with three sharp edges. With the tooth held in the correct position, the sharp end was pushed firmly through

the hole thus temporarily securing it to the base. Each tooth was similarly treated, the triangular point allowing solder to flow through the joint and for any minor adjustment of the inclination of the post to be made while it was still held securely. To fix the post permanently, a minute piece of gold solder of the appropriate carat was placed on the projecting aspect of the point, followed by a drop of flux which was made by rubbing a crystal of borax in a small amount of water in the hollow of a glass block to produce a smooth cream. (Image 5) Using a spirit lamp and mouth blow pipe the area of point and plate was heated until the solder melted and 'ran', making a permanent union. The projecting point of the post was then cut away and the surface polished smooth, the tooth replaced and the post adjusted in length to

project a small amount above the enamel surface. Posterior teeth from and including the first pre-molar on each side of the arch were replaced by blocks of bone or ivory secured with at least two posts each.

The fixing of natural human teeth and bone blocks to the base had to rely on riveting as there were then no satisfactory cements for bonding dentine to metal. Holding plate and tooth firmly in position with the palatal surface of the post exactly over the end of the horn of the anvil, a series of light blows were struck around the very edge of the post using the point of the riveting hammer; the aim being to swell the metal and form it into the shape of the head of a pin. This process was repeated until the tooth could not be moved with the fingers and was considered secure. The molar bone blocks were similarly treated but this was a less exacting task, generally given to an apprentice, as should a blow be accidentally mis-struck the soft material did not fracture as would enamel. (Images 6 & 7)

But here later plate workers secured an advantage as porcelain teeth could be cemented to the base. Posts were finished level with the occlusal surface of the tooth, the plate with tooth in place was slowly heated over the spirit flame and when hot, a pin head sized piece of rock sulphur placed on the post in the sulcus of the tooth. Heating continued until the sulphur melted, ran down the post hole and appeared at the junction between the porcelain and the base. At this point the tooth was pressed down and held firmly until all was cold and a secure joint resulted. If it should ever be necessary to repair a plate, or replace a tube tooth, it was a simple matter to reverse the above process.

A spring was then attached to both sides of the dentures. The springs originally fitted to the museum specimen of the "George Washington" type of denture were of the hairpin kind however those shown in the photograph are of a later, superior, commercial make with swivels and rivets and could have been a replacement when a repair was made.

For hairpin springs, gold wire was drawn to the appropriate gauge to produce a 'hard' straight sample, a length of which was fitted into a hole drilled deeply into the distal of the molar block. The other end of the wire was then curved round and similarly fitted into the opposing denture. To insert the dentures the patient would be instructed to hold them together and then manipulate through the lips into the mouth. On releasing, the springs would push the upper up and the lower down; there was no natural retention.

From the early history of the pioneer dental firm of Claudius Ash and Sons, then silver and goldsmiths, we learn that the supply of teeth by grave robbers and battle field ghouls was in the form of human remains - mandibles and parts of skulls, from which members of the firm had to dissect, clean, disinfect and wire together sets of anterior teeth. To the founder of the firm this was a most nauseating task, a fact that would undoubtedly have stimulated research which produced 'the gold tube porcelain tooth', a satisfactory substitute with a root portion longer than the crown. Manufacturing techniques were soon developed that did not require a tube on which to form the porcelain, advances that were quickly followed by the cutting implements mentioned above.

It has been stated that the preparation of dentures of this type required at least six weeks of which most would have been spent in the work room. As a consequence, this article may appear somewhat laboured in describing the various techniques, but it was considered necessary in order to highlight the knowledge and the variety of skills that were required for a successful result. It is no wonder, therefore, that in the time of the industrial revolution when only the finest craftsmanship was acceptable, it took a Master from five to seven years to teach an intelligent apprentice the secrets of his profession. However almost before the apprentice had mastered the techniques of the gold base denture fitted with tube teeth, another major advance in restorative

dentistry occurred, the production of the flat back porcelain platinum pin tooth that displaced the tube tooth from the anterior of the mouth and advanced the making of crowns and bridges to a discipline in its own right.

Appreciation is expressed to Ms. L. Murray for editorial assistance.



Cultural Gifts Program brochure (pictured below), reproduced with permission, Secretariat Cultural Gifts Program, Department of the Environment, Water, Heritage and the Arts, front cover of brochure, *Spanish Portrait*, Hilda Rix Nicholas c1912, gifted to the Newcastle Region Art Gallery.

Museum

Henry Forman Atkinson Dental Museum Approved for The Cultural Gifts Program

The Cultural Gifts Program was established by the Australian Federal Government in 1978 to encourage the growth and support of its public cultural collecting institutions through tax incentives to donors of culturally significant gifts. A broad range of collecting institutions participate in the scheme, their collections encompassing material as diverse as decorative arts, visual arts, social history, scientific collections as well as archives and libraries.

The Henry Forman Atkinson Dental Museum is pleased to announce it has received approval to participate in the Cultural Gifts Program following its endorsement as a Deductible Gift Recipient by the Australian Taxation Office. Under the scheme, donors are able to claim the full market value of a gifted item or items, as a tax deduction.

Many institutions that participate in the scheme have limited financial resources and often find themselves competing with better resourced private collectors and institutions; a situation that can restrict the public institute's capacity to acquire items pertinent to their recognized specialization. The Cultural Gifts Program helps to address this by giving owners of items of cultural significance an alternative to selling on the open market, by rewarding them financially through the tax system. As identified within the scheme, this helps to develop and preserve "Australia's cultural heritage for the benefit of present and future generations."¹



All collections rely on the generosity of donors and over the years the Henry Forman Atkinson Dental Museum has been fortunate to receive a number of wonderful items from dental history which have helped to make the collection comprehensive in its representation of the development of dentistry and dental education in Victoria. Donated items have included dental instruments, dental equipment and furniture, photographs, documents including early certificates and indentures, student memorabilia, historical teaching material, and key collection items such as the "George Washington" denture, to name but one of more than 2500 objects.

Now that the dental museum has received approval to participate in the program, future donors may find opportunities to take advantage of the benefits offered through the scheme. If you would like to find out more about the program, or if you believe you have an item of cultural significance that you are interested in donating to the museum, contact the honorary curator Professor Atkinson at hfa@unimelb.edu.au or the curator Louise Murray at murrayl@unimelb.edu.au phone 03 9341 1518.

The program is administered according to the gift provisions of income tax law and is administered by a Secretariat in the Department of the Environment, Water, Heritage and the Arts. A copy of the cultural gifts program guide can be found on the department's website at: www.arts.gov.au/cgp.

LOUISE MURRAY

¹ Australian Government, Department of Environment, Water, Heritage and the Arts, Cultural Gifts Program brochure www.arts.gov.au/cgp.



Dr Asmaa Alkhatib with her husband Nas and their sons Ahmed and Yousif.

Dr Asmaa Alkhatib DclinDent (Paediatric Dentistry)

Asmaa attended Khartoum University, Sudan and graduated in 2000 with a Bachelor of Dental Surgery degree. In October 2000 she started her dental internship for twelve months at Hamad Medical Corporation (HMC), Qatar. This was followed by a residency position in the dental hospital, Qatar, until mid 2002.

In mid 2002, Asmaa joined the Health Services of the Ministry of Interior Affairs, Qatar, where she worked as a general dentist and clinical forensic dental officer, consulting with the Police Department in trauma cases and submission of appropriate reports corresponding to these cases. In late 2003, Asmaa worked in the primary health care department as a general dentist in several health centres, including School Dental Services in Qatar.

Asmaa enrolled in the Doctor of Clinical Dentistry in 2005 and passed her final clinical and didactic examination on the 10th June 2009. She has a passion for Paediatric Dentistry and enjoys providing dental care for her young patients. In addition, she enjoys educating her patients and their families about making healthy choices that can contribute to healthy oral habits among the community to prevent oral diseases. Because of her passion for oral health, Asmaa is enrolled in the Melbourne Dental School to undertake a PhD in the area of public health under Professor Mike Morgan and Professor Louise-Breareley-Messer.

When Asmaa started in 2005 she had a 22 month old boy, Ahmed, who is now 6 years of age. It was extremely difficult to accommodate both postgraduate study and family life. However, Asmaa has a very supportive husband who provided her with endless support and encouragement.

Life in Australia was difficult to start, with no extended family support, no friends or network and a very different life style to Qatar. However, when the years passed by, a beautiful social network grew for Asmaa and her family including local families and international student families. Now Asmaa and her family have become so used to the Melbourne life style that they missed Melbourne so much in their last holiday back home.

During her final year of her postgraduate study, Asmaa had another baby boy who is now 23 months now. The academic staff at the Melbourne Dental School were as a family for Asmaa during her postgraduate study and for that she is extremely grateful.

Right: Dr. Philip Tan and Dr. Igor Cernavin.

Far right: Dr. Graham Woolley, Dr. Philip Tan, Dr. Rebecca Wong, A/Prof Peter Parashos, Dr. Simon Wylie and Dr. Joseph Palamara during the Q&A session.



UPDATE D E C

2009 Multidisciplinary Approach Towards Management of the Cracked Tooth

DR. ROY B JUDGE DIRECTOR CONTINUING PROFESSIONAL DEVELOPMENT

On Friday 24 July, the Melbourne Dental School, Continuing Professional Development Program in conjunction with the ADAVB ran its first joint CPD program for 2009.

The course was held over two days and comprised a full day lecture which was held at the Sofitel Melbourne and a half day hands on component held at the Melbourne Dental School. 200 delegates attend the lecture which was Chaired by Dr. Igor Cernavin. Our keynote speakers for the day were A/Professor Peter Parashos, Professor William G Young (QLD), Dr. Rebecca Wong, Dr. Philip Tan, Dr. Graham Woolley, Dr. Peter Sutherland, Dr. Joseph Palamara and Dr. Simon Wylie. The lab session which was held on the Saturday was run over two sessions each with 25 participants. Drs. Wong, Tan and Woolley were the presenting demonstrators for the day.

Delegates attending this program offered positive feedback and the combination of a larger conference style lecture program with a laboratory session to compliment the didactic learning will now be a regular feature with future CPD programs.

We would like to extend our thanks to all our presenters for their time and effort. Their wealth of knowledge and experience made the program a success. Also a special thanks to Samantha Vassallo La Rosa and Elena Malgeri for all their hard work throughout the year organizing the program. Janice Wong from the ADAVB was kindly able to assist us for

the Friday lecture and I thank all our ADAVB colleagues for their assistance in preparation for this learning event. Finally, our School Pre-clinical lab staff, Mr. Mario Smith and Mrs Sue Dobell who were available on the Saturday to assist our demonstrators and participants throughout the day.

The CPD unit look forward to offering many new and exciting course of this nature to our dental colleagues during 2010 and beyond.

Minimal Intervention Dentistry

Friday 26th March 2010
BLOCK OFF YOUR DIARIES NOW!

The Melbourne Dental School and the CRC for Oral Health Science are proud to present an exciting new program entitled Minimal Intervention Dentistry. This full day program brings together the extensive research that has been carried out at the Melbourne Dental School and CRC Oral Health Science cooperative research centre with insights into how these newly developed treatment philosophies are directly applicable to the clinic.

Professor Eric Reynolds (Head of the Melbourne Dental School and CEO of the CRC) will show how concepts of remineralisation and demineralisation are continually being developed with applications to clinical dentistry.

Dr. David Manton (Head of Paediatric Dentistry, Melbourne Dental School) is to discuss novel and new methods of caries detection underlying the need for early detection and the potential for non-destructive treatment philosophies to be applied.

Dr. Stuart Dashper (Head of Oral Biology, Melbourne Dental School) will outline the important role of biofilms within the oral cavity and their influence on the disease process.

Professor Martin Tyas (Head of Restorative Section, Melbourne Dental School) will discuss the philosophies of minimal intervention dentistry and its wide spread application over the last ten years of clinical practice.

Professor Michael Burrow (Clinical Dean, Melbourne Dental School) will show the results of exciting new research into the modification of glass ionomer cements to effectively enhance their remineralising role.

Dr. Alexander Sabrini (BDS, MDSc, PhD Scholar, University of Sydney) will show how she has implemented these philosophies successfully in her own practice.

This will be an exciting new program which will enthuse all those attending, to return to their practices with a fresh perspective on the management of dental caries.

This program will be part of the 2010 CPD program and is scheduled for Friday 26 March 2010 at the Bio21 Institute.

For further information and enrolments for this program, please contact the Continuing Professional Development Office on (03) 9341 1506, Fax (03) 9341 1595 or by email at cpd-dent@unimelb.edu.au

This course is proudly sponsored by GC and Henry Schein Halas



Profile



Class of 1979 30 Year Reunion

By Dr SHANE MCGUIRE

The graduating class of 1979 recently celebrated its 30th anniversary at the Athenaeum Club in Melbourne with approximately 70 people attending with their partners. The night commenced with pre-dinner drinks which provided an excellent opportunity for guests to mingle and catch up with colleagues, many of whom had not seen each other since the twenty year reunion.

The dinner and wine provided were exceptional. Between the main course and dessert was the highlight of the night. Alan Carlton provided the keynote address, which included moments of history, reflection and views of the world (which after this talk some of us believe he should manage).

However, it was Alan's wit and rib-tickling finesse that impressed us most.

Overall, it was a great night and we look forward to 2019 for the 40th anniversary celebration.

Thank you goes to the Organising Committee consisting of Phil Zimet, Julie Fraser, Jo-anne Cherry, Gerry Clausen, Shane McGuire. Music - provided by an excellent string quintet, organised by Michael Woods. Entertainment by Alan Carlton – legendary performance! The prize winner - Kevin Smith – well done in getting the trivia question correct so quickly.

Thanks to Jenny Sifonios from the Melbourne Dental School who provided a huge level of coordination support.

1. Julie Fraser, Phil Zimet.
2. The String Quartet.
3. Kevin Smith, Andrew Wood, Gary Owen, Gus Del Rio.

From the Editor

We hope you enjoyed reading this edition of Dent-al, the Melbourne Dental School's newsletter for alumni. We would be very pleased to have your feedback on this issue and if you would like to contribute in any way, or have any suggestions for future issues, we would be very pleased to hear from you.

If you have any items of interest, please let us know.

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Reunions

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