

Expressions

Newsletter of the HKU Faculty of Dentistry
2013, Issue 2



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Encouraging engagement

By Lakshman Samaranayake, Dean

One of The University of Hong Kong's core missions is Knowledge Exchange (KE) with non-academic audiences, and this is included in the HKU Faculty of Dentistry's fourth mission of Engagement (which complements and adds value to Learning, Discovery, and Patient Care).

Set up in 2008, the Faculty's KE Unit is tasked with building KE capacity, enabling extracurricular community activities, fostering collaboration, and encouraging dialogues with our non-academic audiences. This year marks the KE Unit's fifth anniversary, so it seems an opportune time to review the Faculty's progress in connecting with the public and with collaborative partners.

Business and professional links

Interaction between our Faculty and business or professional communities leads to mutually beneficial partnerships and catalyses innovation and joint problem-solving and problem prevention. The link between local dentists and our undergraduates via our annual mentorship programme has been invaluable—for strengthening friendships between the Faculty and the local dental community, for dentists to hone their communication skills,

and for students to gain professional insights and develop personally.

From publication to public action

Several of our staff have taken part in media interviews to share their oral health expertise, increase public awareness of oral and overall health, and help in sense-making and understanding of published peer-reviewed research findings. The direct practical relevance of the Faculty's work to public health and quality of life has spurred our staff and students to conduct extracurricular health promotion projects aimed at providing information, discussion, education, individual consultation, disease prevention, and intervention.

KE is an exciting mission that promotes dynamic interactions with the community and in turn helps to further advance knowledge and influence agendas in policy, research, and education. This issue of *Expressions* highlights some KE activities and confirms that KE is embedded in Faculty life and development. Other examples of KE projects are showcased in the booklet *Making an Impact*, which can be downloaded at <http://tiny.cc/v1mx2w>.

Happy reading! ■



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Dean receives royal title

Prof Lakshman Samaranayake (HKU Dean of Dentistry, Chair Professor of Oral Microbiology, and Tam Wah-Ching Professor in Dental Science) has been bestowed with the additional title of “King James IV Professor” by the Royal College of Surgeons of Edinburgh (RCSEd), United Kingdom.

The royal title was formally conferred on Prof Lakshman Samaranayake (pictured, R) after he delivered the annual RCSEd King James IV Oration on 16 May 2013 during the 4th World Congress of the International Academy of Oral Oncology (IAOO) in Rhodes, Greece. Presenting the award on behalf of the RCSEd was Prof Crispian Scully, President of the IAOO and Member of the RCSEd Dental Council (pictured, L).

The accolade, one of the most prestigious given by the RCSEd, was awarded in recognition of Prof Samaranayake’s outstanding contributions to surgical sciences.

During his career so far, Prof Samaranayake has authored about 400 research articles and has been cited in the international literature more than 11,000 times. His major research focus is the fungal infection known as oral candidiasis, and he has published more than 250 research

articles on that disease in the past 30 years. He is the world’s foremost expert on oral candidiasis, according to the website Biomedexperts.com.

Hailing from Sri Lanka, Prof Samaranayake is the first Asian to be named a King James IV Professor.

“It is a singular honour for me to receive this coveted award, which is also a first for Asia,” he said. “I am privileged to have been chosen for the King James IV Professorship and wish to gratefully acknowledge the help and support of many of my colleagues who helped me realise this wonderful goal.”

The King James IV Professorship was established by the RCSEd in 2001 to celebrate the new millennium, with the permission of Her Majesty Queen Elizabeth II. It is offered in open competition to RCSEd Fellows who are consultants in surgery or dental surgery and who have made a significant contribution to the clinical or



scientific basis of surgery, and acquired a national or international reputation. Only about 30 professorships have been awarded since its inception. ■

Three minutes of fame



Ms Sarah SW Wong (PhD student in Oral Biosciences) has won this year’s annual Online People’s Choice Award in the HKU 3-Minute Thesis (3MT) Competition, organised by the HKU Knowledge Exchange Office to encourage public understanding of HKU research.

Ms Wong was one of the 10 finalists of the live 3MT contest, and her 3-minute YouTube video attracted the most Likes during the public voting period in the online version of the contest.

In her presentation, “Discovery of a ‘magic bullet’ for a deadly fungus”, Ms Wong explained how she identified a new antifungal agent in the laboratory, which could potentially be turned into an antifungal drug for humans. The discovery was made during her PhD studies, supervised by Prof Lakshman Samaranayake and Dr C Jayampath Seneviratne (now at the National University of Singapore). Her winning video can be viewed at <<http://www.youtube.com/watch?v=TfB6oHiz1Gg>>.



HKU honours Faculty staff at awards night

Thirteen Faculty staff members received awards for achievements in teaching, research, and knowledge exchange at the 2012 HKU Awards Ceremony on 27 March 2013. Many congratulations to all the winners, who are listed below, with excerpts from the ceremony programme booklet (photos courtesy of the HKU Communications and Public Affairs Office):

Awards for Teaching



Dr Susan Bridges (Team Leader; Assistant Professor in Dental Education and E-Learning), Prof Cynthia KY Yiu, Dr Michael Botelho, Prof Edward CM Lo, Dr Peter CS Tsang, Dr Rory Watt, Dr Yanqi Yang, and Miss Jessica W Wong won an HKU Outstanding Teaching Award in the team category, for “PBL 2.0: E-learning for problem-based learning (PBL) at the Faculty of Dentistry”.

The team’s vision of a blended approach has been to motivate digital-age learners and to enhance the problem-based aspects of the curriculum, with a focus on heightened visualisations and technological interactivity during face-to-face tutorials in PBL tutorial rooms while also expanding online resources for self-directed learning. In considering spaces of learning, the installation of new hardware in the form of Interactive White Boards has not only improved visualisation of stimulus materials and student-accessed information but, in doing so, has supported tutorial group collaboration.

While rethinking face-to-face learning, the team has also expanded online digital resources such as videos and 3D simulations in the virtual space of the BDS Web Learning Centre. This team has, therefore, moved forward from the first-stage “digital repository” approach for the Learning Management System—where student engagement with the available online resources was out-of-step with the face-to-face knowledge co-construction process during tutorials—towards a synchronous integration of educational technologies within face-to-face tutorials. ■



Dr May CM Wong (Associate Professor in Dental Public Health) won the HKU Faculty of Dentistry Outstanding Teacher Award 2011.

The Faculty’s Outstanding Teacher Award was established to recognise and encourage staff who have made a

major contribution in advancing teaching and learning by maintaining an exceptional record of sustained teaching and learning activity in undergraduate and/or postgraduate education.

As a statistician, Dr May CM Wong wholeheartedly devotes herself in educating students to learn and understand biostatistics and research methodology applied in dental research. Conducting dental research with appropriate study design, data analysis, and use of software packages contributes significantly to good clinical practice and evidence-based dentistry. In her teaching, Dr Wong considers the students’ perceptions of their learning needs, designs the curriculum based on their needs, ensures the students see how the teaching is related to their research work, and uses different teaching and learning modes in achieving these learning outcomes. ■

Award for Research

Dr Rory Watt (Assistant Professor in Oral Biosciences) and co-authors won the HKU Faculty of Dentistry Research Output Prize 2011-12.

Exonuclease (DNA-digesting) proteins play key roles in bacterial evolution, infection processes, and the acquisition of antibiotic resistance genes. This research paper ("Structural and functional insight into the mechanism of an alkaline exonuclease from *Laribacter hongkongensis*, by Wen Yang, Wenyang Chen, Hui Wang, John WS Ho, Jiandong Huang, Patrick CY Woo, Susanna KP Lau, Kwok-yung Yuen, Qionglin Zhang, Weihong Zhou, Mark Bartlam, Rory M Watt, and Zihe Rao in *Nucleic Acids Research*, 2011;39:9803-19") reported the 3-dimensional X-ray crystal structure of an exonuclease protein from the bacterium *Laribacter hongkongensis*, which was first discovered in Hong Kong. Solving this protein structure enabled the function of this family of



exonuclease proteins to be described in molecular detail. This research adds to the fundamental understanding of DNA repair processes in microorganisms involved in oral and systemic diseases. The results will also facilitate the rational development of improved methods for bacterial genetic engineering for biotechnological applications. ■

Award for Knowledge Exchange

Prof Edward CM Lo (Clinical Professor in Dental Public Health) and project team members Prof Lijian Jin, Prof Lakshman Samaranayake, Dr C Jayampath Seneviratne, Dr Xiaoli Gao, and Dr Susan Bridges won the HKU Faculty of Dentistry Knowledge Exchange Award 2012 for their project titled "Enhancing student learning of biological sciences through capacity building of secondary school science teachers" (two Impact Projects funded by the HKU Knowledge Exchange Fund, 2010-12).

Prof Edward CM Lo and his team members developed an innovative programme using dentistry as a context to facilitate science learning, especially biology and chemistry. Teaching materials were developed and a series of workshops was organised for secondary school teachers to improve their knowledge and skills in using innovative and interactive teaching methods that related to real-life dental problems. The



workshops were also attended by students of the participating schools and the Education Bureau. Because dental examples such as oral microorganisms and dental diseases can be readily demonstrated, students effectively grasped the scientific concepts behind disease processes. The project's impact extended beyond enriching teaching and learning of science, as there was also increased oral health awareness. ■



Oral health in the spotlight

Thanks to the efforts of staff members who have regularly shared their expertise with the public in TV, radio, and newspaper interviews, the HKU Faculty of Dentistry has appeared in more than 400 mass media outputs in the past 3 years.

According to the HKU Communications and Public Affairs Office in its annual media audits starting from 2010, the Faculty participated in public knowledge exchange (KE) via 142 media outputs from July 2010 to June 2011, 111 from July 2011 to June 2012, and 159 from July 2012 to June 2013.

When possible, copyright permission has been sought to archive the outputs online for future public viewing of media mentions and oral health information. For example, at the beginning of this year, the following staff took part in programmes in the iCableTV “至Fit男女” (“Health and Fitness”) series, archived at <http://facdent.hku.hk/index.php/news-events/faculty-media/media-archive/tv>:



- 27 January 2013: “Jaw nerve damage”, [Dr Mike YY Leung](#)
- 20 January 2013: “Jaw pain”, [Prof Lim K Cheung](#)
- 13 January 2013: “Paediatric dentistry”, [Dr Celine CH Cheong](#)
- 6 January 2013: “Dental decay”, [Dr Chun-hung Chu](#)

Furthermore, the following staff took part in the Phoenix TV HK “Best Medical Apps” series, archived on the Faculty’s YouTube channel at



<http://www.youtube.com/user/hkufacdent>:



- 9 March 2013: “Orthodontics II”, Dr Alexander TH Tang, Dr Ricky WK Wong, and Dr KZ Yuen (alumnus)
- 2 March 2013: “Orthodontics I”, Dr Alexander TH Tang, Dr Gloria HM Wong, [Dr Balvinder Khambay](#), and [Dr Yanqi Yang](#)

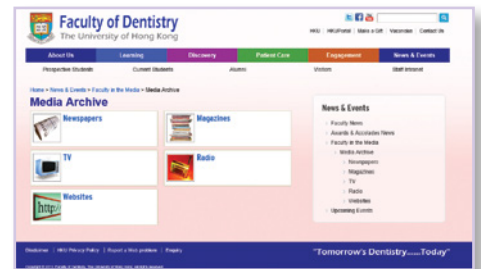
- 23 February 2013: “Wisdom teeth”, Dr WH Yau (alumnus), Dr Mike YY Leung
- 26 January 2013: “Implant dentistry”, [Dr Edmond HN Pow](#)
- 19 January 2013: “Making replacement teeth using computers”, Dr Chun-hung Chu
- 12 January 2013: “Oral tumours”, [Dr Winnie WS Choi](#)
- 5 January 2013: “Root canal treatment”, [Prof Gary SP Cheung](#)

Links to newspaper and magazine articles featuring Faculty staff can be accessed at the Faculty’s archive at <http://facdent.hku.hk/index.php/news-events/faculty-media/media-archive>.



Examples of news articles in the first half of 2013 include the following:

- 17 June 2013, Ming Pao, D1: “Beware of fluoride-staining of teeth before 8 years of age”, [Prof Edward CM Lo](#)
- 31 May 2013, Hong Kong Daily News, A2: “Children and the elderly need to choose fluoride toothpaste carefully”, [Prof Edward CM Lo](#)
- 31 May 2013, Sing Tao Daily, A13: “Visit your dentist on World No Tobacco Day”, [Dr Angeline HC Lee](#)
- 29 April 2013, Oriental Daily, A16: “Oral health program for Indonesian domestic helpers promotes correct brushing for elders and children”, [Prof Edward CM Lo](#)
- 11 April 2013, Apple Daily, A18: “Brushing hard may not help”, [Dr Ricky WK Wong](#)
- 15 March 2013, Ming Pao, A28: “No improvement on the ratio of Hong Kong people getting periodontal disease over the last decade”, [Prof Edward CM Lo](#)
- 3 April 2013, Ming Pao, E5: “Happy baby: stopping pacifier/finger sucking habits can prevent speech problems”, [Prof Cynthia KY Yiu](#)
- 5 February 2013, Sing Tao Daily, A15: “Bruxism”, [Dr Edmond HN Pow](#)



On board: Cuttings of newspaper and magazine articles are now posted on the Faculty’s media board in the lobby of the Prince Philip Dental Hospital, and TV interviews are shown via the hospital TV system.

Connecting with the community

The HKU Faculty of Dentistry held three knowledge exchange (KE) events in the springtime to encourage the application of oral health knowledge in the local community and to promote awareness of the role of oral health in overall health.

The inaugural events organised by the Faculty KE Unit were two 1-day oral health exhibitions for the public and a Mixer Evening between the Faculty and non-governmental organisations (NGOs). "We hope these events will become annual opportunities to encourage engagement between the Faculty and some of our different publics," says Prof Lakshman Samaranayake, HKU Dean of Dentistry and Director of the Faculty KE Unit.

World Oral Health Day

About 200 visitors came to the Faculty's exhibition booth at the lobby of the Prince Philip Dental Hospital on 20 March 2013 to mark the FDI World Dental Federation's annual "World Oral Health Day".

The main message of the event was "Healthy teeth for a healthy life", with the practical tips of (1) Healthy eating, (2) Effective home oral care, and (3) Regular dental visits. The event included an Oral Health IQ Quiz Desk, a "Brush Up on Your Technique" consultation desk, and small-group

presentations on baby oral health. The booths were staffed by BDS student volunteers from the Dental Public Health Committee, the Student KE Group 2012-13 on baby oral health (Miss Tiffany CL Chan, Miss Tsz-yan Li, Mr Kenneth CK Wong, Mr Kenneth KC Chow, Mr Kenneth KH Yung), and Faculty mentors [Dr Yanqi Yang](#) and [Dr Dominic KL Ho](#). "Questionnaire feedback showed the participants enjoyed the personal interactions and explanations," says Dr Yang.



World No Tobacco Day

The Faculty also held an oral health exhibition in the lobby of the Prince Philip Dental Hospital on 31 May 2013 to mark the World Health Organization's "World No Tobacco Day".

Activities for the public included individual consultations and a Q & A prize draw. Each of the 300 visitors received an information pack and a gift bag containing an apple, mineral water, a pack of sugar-free gum, a bottle of mouthwash, and a toothbrush. Special thanks go to the gift and prize donors, Listerine (Johnson & Johnson), Extra (Wrigley), and Oral B (P&G).



The following staff/student volunteers helped at the event and together encouraged the visitors to "Make everyday World No Tobacco Day": [Dr Chun-hung Chu](#), [Dr Mike Leung](#), [Dr Angeline Lee](#), Dr Yanqi Yang, Ms Sau-wan Cheng, Mr Oi-sing Au, Mr Manson Tong, Ms Joann Zhao, Dr Jeevani Epasinghe, Dr Mei Lei, Ms Grace Liu, Dr Angelina Wang, Ms Zhang Shinan, Dr Ronald Chan, Dr Jack Chao, Dr Angus Ho, Dr Shirley Kot, Dr Karen Lai, Dr Roxy Ng, Dr Elsa Siu, Dr King-tai Tang, Dr Mildred Wong, and Dr Andy Yeung.

"Nearly all of the 115 visitors who filled in the feedback forms rated the event as good or very good, and comments indicated the event was useful in improving knowledge of smoking's harmful effects on the mouth and body," says [Dean Samaranayake](#). ■



Faculty – NGO Mixer

The inaugural Faculty – NGO Spring Mixer on 15 April 2013 was attended by 17 Faculty senior staff members and 31 representatives from 18 NGOs.

Supported by the HKU KE Fund 2012-13, the mixer event aimed to promote KE project planning and joint KE grant proposals involving community partners. During the evening, Faculty staff gave brief presentations of some KE projects as examples of applying dental knowledge in the community.

For photo and video coverage, please visit <http://tiny.cc/lx173w> or use the QR code on the right.



Dentistry beyond the clinic

Dr Chun-hung Chu (Clinical Associate Professor in Community and Family Dentistry, and Deputy Director of the Faculty's Knowledge Exchange Unit) has been taking oral health promotion into non-clinical settings and advancing knowledge exchange beyond Hong Kong.



Checking for caries

On 25 February 2013, Dr Chu was invited to share his expertise in the visual detection of dental caries (tooth decay) in young children during an HKU workshop attended by non-clinicians.

The workshop was part of a 3-day event organised by the Asia-Pacific Regional Network for Early Childhood and the HKU Faculty of Education's Early Childhood Development, Education and Policy Group, with the support of the United Nations Children's Fund (UNICEF) and the Open Society Foundations. All four bodies were represented at the event, in addition to government officers and academics from eight countries.

The detection of caries by non-clinicians is an optional assessment item in the East Asia-Pacific Early Child Development Scales (EAP-ECDS), which the HKU Faculty of Education's Early Childhood Development, Education and Policy Group has formulated as a standard way of monitoring growth and development of 3- to 5-year-olds in the region.

"The EAP-ECDS project team appreciates Dr Chu's sharing of knowledge and experience, and looks forward to future collaborations with him and the HKU Faculty of Dentistry," says Ms Diana Lee, Project Manager of the EAP-ECDS project team.



SERVICE 100 Project

From 29 June to 4 July 2013, Dr Chu led an outreach service project on the mainland called "Oral health promotion in Yunnan, China",

supported by a grant of HK\$19,500 from the HKU SERVICE 100 Fund 2013.

The other members of the HKU Oral Health Service Team were project coordinator Dr Shinan Zhang (3rd year Faculty PhD student in Oral Diagnosis and Polyclinics); core team members Ms Carolle KP Mok (BDSI), Ms Si-ling Pang (BDSI), Ms Phoebe PY Lam (BDSII), Ms Jessica KK Leung (BDSII), Dr Ying Cao (2nd year Faculty PhD student in Oral Diagnosis and Polyclinics), Dr Chenghui Jiang (3rd year Faculty of Education PhD student in Speech and Hearing Sciences); and project assistants Dr Lei Mei (Research Assistant) and Ms Rita PC Suen (Research Assistant).

The project, which took place in rural Kunming, consisted of free clinical check-ups, simple dental treatment such as fillings and topical fluoride application, demonstrations, and fun educational activities for a total of about 400 children in four kindergartens. Souvenirs were donated by Colgate Palmolive (HK) Ltd and Wrigley (HK) Ltd. ■



Homeless, not toothless

On 2 May 2013, a student dental team mentored by Dr Chu (postgraduates Dr Shinan Zhang, Dr Jade J Zhu, and Dr Chris C Ying and undergraduates Ms Kay-shuen Chan, Ms Jasmine TK Law, Mr Stephen Sutanto, and Mr Chris MH Chan) provided an outreach dental service for homeless people at Saint Barnabas' Society and Home.

The outreach service included an oral health education talk, dental examinations, and individual oral health reports. Health care products were donated by Colgate Palmolive (HK) Ltd and Johnson & Johnson (HK) Ltd. The extracurricular project allowed students to understand better the dental needs of homeless people, to help in the planning of more volunteering activities. More than a quarter of the 37 attendees did not perform daily tooth brushing, and many had dental caries. Their gum health was also poor, and about half had advanced gum disease.

Mussel power

The way that mussels firmly stick to underwater objects has inspired scientists from The University of Hong Kong and Anhui Medical University to develop a new laboratory technique of tooth remineralisation.



The researchers—including Dr Chun-hung Chu and Dr Ying Cao from the HKU Faculty of Dentistry—put demineralised tooth slices in a solution of dopamine, which self-assembled in 1 day into a cross-linked network of polydopamine over the tooth surface, mimicking how mussels produce their adhesive. Then, slices with and without the polydopamine coating were immersed in a solution containing calcium and phosphate for up to 1 week. Electron microscopy showed that the polydopamine-coated teeth had formed new mineral crystals in both enamel and dentine layers. Without the polydopamine coating, only the enamel layer had remineralised.

Thus, treatment with dopamine followed by calcium and phosphate may represent “a simple universal technique” of mineral replacement for both dentine and enamel. However, development of this approach for clinical application would need to consider any toxic effects of the dopamine step, the authors caution.

[Zhou YZ, Cao Y, Liu W, Chu CH, Li QL. *ACS Appl Mater Interfaces* 2012;4:6901-10.]

[Link to Medline abstract](#)



Dental first-aid

Many Hong Kong teachers do not know the best way of dealing with dental injuries that could happen in their primary or secondary schools, indicating a need for training in first-aid for teeth, a study team including Prof Lim K Cheung from the HKU Faculty of Dentistry has concluded.

Of 594 teachers who returned completed surveys, 51% had taken a first-aid course but only 8% had learnt about the management of dental injuries in such a course. Although 73% of the teachers knew that dental injuries should be cared for immediately, only 33% correctly said that the injured person should be taken to a dentist. Only 16% knew that a knocked-out permanent tooth should be put back, and 20% correctly identified one of the three liquids that a knocked-out tooth could be temporarily stored in—namely, cold milk, physiological saline, or saliva. The researchers hope that their findings will spur the Hong Kong Education Bureau to offer “resources to equip school teachers with appropriate knowledge”.

[Young C, Wong KY, Cheung LK. *Hong Kong Med J* 2012;18:362-70.]

[Link to Medline abstract](#)



Decayed decade

Roughly one half of Hong Kong’s preschool children show signs of tooth decay (dental caries) and nearly all of these children have untreated decay, a team of HKU dentists has reported.

Among 700 children aged 4 to 6 years from 7 randomly selected kindergartens, 49% showed any signs of tooth decay. On average, each child had a total of 2.2 decayed, missing, or filled teeth. The average number of teeth with untreated cavities was 2.1 per child, representing more than 95% of the affected teeth and showing that preschoolers’ dental health has remain unchanged in the past decade.

Statistical tests revealed that the most important factors affecting dental health were snacking frequency, dental visits, parents’ oral health knowledge, and family income. Oral health promotion in kindergartens requires the involvement of not only the children, but also their parents and teachers, the authors conclude.

[Chu CH, Ho PL, Lo ECM. *BMC Public Health* 2012;12:767.]

[Link to Medline abstract](#)



Air condition

The positions of windows, doors, furniture, and pollutant sources can affect the quality of air in a naturally ventilated dental clinic, according to a research team that included Dr Gloria HM Wong from the HKU Faculty of Dentistry.



Noting that the Hong Kong Government has advocated natural ventilation for residential buildings, the researchers experimented with applying the concept to dental clinics. They performed computer simulations for a long clinic containing multiple dental chairs and partitions, three equally spaced doors on one wall, and six windows on the opposite wall. Exposure to a pollutant was predicted to depend on the path and time taken for it to exit a window. Clearing was fastest and most direct if an open door was opposite an open window and if the pollutant source was close to the window. In general, clearing was slower and pollutant spread was greater if the open door and window were far away from each other. Still, this “dispersive ventilation path can be used to decrease the indoor air age” when the pollutant level is low, the team advises.

[Zhang W, Mak CM, Wong HM. *Building Serv Eng Res Technol* 2013;34:245-8.]

[Link to Medline abstract](#)



Congratulations

In addition to the accomplishments mentioned in the rest of this issue, Faculty staff and students have achieved the following successes:

- **Six students have been awarded summer industry intern scholarships:**
 - With Colgate-Palmolive (HK) Ltd: **Mr Dominic YS Chow** (BDS IV) and **Mr Nicholas YL Ng** (BDS III)
 - With GlaxoSmithKline (HK) Ltd: **Mr Kelvin KW Choi** (BDS III) and **Mr Nic CH Leung** (BDS V)
 - With Oral-B: **Mr Tommy TW Chow** (BDS IV) and **Mr Chun-pang Poon** (BDS IV)

- **The following eight Faculty staff have been awarded a total of HK\$5,959,741 in research grants from the HKSAR Research Grants Council's General Research Fund 2013-14:**
 - **Dr Michael Burrow** (Clinical Associate Professor in Operative Dentistry)
 - **Prof Lim K Cheung** (Chair Professor of Oral and Maxillofacial Surgery)
 - **Dr Chun-hung Chu** (Clinical Associate Professor in Community and Family Dentistry)
 - **Prof Lijian Jin** (Clinical Professor in Periodontology and Modern Dental Laboratory Professor in Clinical Dental Science)
 - **Dr Nikos Mattheos** (Clinical Associate Professor in Implant Dentistry)
 - **Dr Rory Watt** (Assistant Professor in Oral Biosciences)
 - **Dr May CM Wong** (Associate Professor in Dental Public Health)
 - **Dr Yanqi Yang** (Clinical Assistant Professor in Orthodontics)

- **Dr Mike YY Leung** (Clinical Assistant Professor in Oral and Maxillofacial Surgery) and **Dr Otto LT Lam** (Clinical Assistant Professor in Oral Rehabilitation) have been awarded Early Career Scheme project grants 2013-14 from the HKSAR Research Grants Council, totalling HK\$1,336,000.

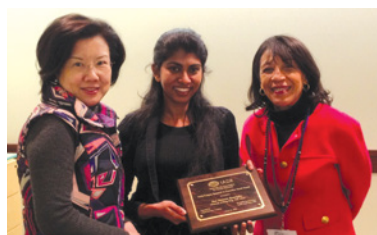
- **Dr Ricky WK Wong** (Clinical Associate Professor in Orthodontics) and **Dr Yanqi Yang** (Clinical Assistant Professor in Orthodontics) have been awarded the Fellowship in Dental Surgery without Examination by The Royal College of Surgeons of Edinburgh, UK.

- **Ms Cordelia KP Chan** (Tutor in Dental Hygiene), **Prof Gary SP Cheung** (Clinical

Professor in Endodontics), **Prof Edward CM Lo** (Clinical Professor in Dental Public Health), and **Dr Henry WK Luk** (Tutor in Dental Technology) were presented with HKU Long Service Awards by Vice-Chancellor Prof Lap-chee Tsui, at the 2013 Long Service Awards Presentation Ceremony for Terms of Service I Staff on 11 June 2013, for 25 years or more of service to HKU.

- **Dr Hamdi HH Hamama** (PhD student in Paediatric Dentistry and Orthodontics in the field of Aesthetic Dentistry; supervisors, **Prof Cynthia KY Yiu** and **Dr Michael Burrow**) won an Individual Award, Pan Asia Pacific category, on 20 April 2013, at the 16th HKU Prize Presentation Ceremony for Student Winners of External Competitions in 2012. He was recognised for his research success at the 26th Annual Scientific Meeting of the International Association for Dental Research South-East Asia Division (IADR-SEA), Hong Kong, 2012, where he won the IADR-SEA Best Paper Award in Cariology Research/Mineralized Tissue Research for an oral presentation titled "Effect of enzymatic-based chemomechanical caries removal on dentine bonding".

- **Dr D Jeevanie Epasinghe** (PhD student in Paediatric Dentistry; supervisors, **Dr Cynthia KY Yiu** and **Dr Michael Burrow**) won an IADR/Colgate Research in Prevention Travel Award to attend the 91st General Session of the International Association for Dental Research in Seattle, Washington, USA,



on 20-23 March 2013, for her paper titled "Synergistic effects of proanthocyanidin and CPP-ACFP on remineralization of root caries".

- **Dr Aneesha Acharya** (MPhil student in Implant Dentistry; supervisor, **Dr Nikos Mattheos**) won the IADR Young Investigator Implantology Research Group Award at the 91st General Session of the International Association for Dental Research in Seattle, Washington, USA, on 20-23 March 2013, for her oral presentation titled "Periodontal bone loss, sinus pathology predict posterior maxillary ridge height", co-authored with **Dr Jia Hao**, **Dr Anson Chau**, **Dr Nikos Mattheos**, and **Dr Niklaus Lang** (all from HKU at the time of the project), and **Dr Prashant Shirke** (InSight CBCT Center, Mumbai, India).



- **Mr Chow-ming Lo** (Laboratory Assistant in the Education and Media Technology Unit) received an HKU Long Service Award from Vice-Chancellor Prof Lap-chee Tsui at an awards ceremony on 19 February 2013, for 40 years of service to HKU.

Staff moves

The Faculty bids a warm welcome to:

- **Mr Oi-sing Au**, Communications and Development Officer

...And congratulations to:

- **Dr Dominic KL Ho**, who has been appointed as Clinical Assistant Professor in Periodontology

...And a fond farewell to:

- **Dr C Jayampath Seneviratne**, Research Assistant Professor in Oral Biosciences
- **Mr Mai-fai Cheung**, Tutor in Dental Radiography

Promoting an early start for oral health



Dr Yanqi Yang (Clinical Assistant Professor in Orthodontics) and her Faculty team in knowledge exchange (KE) have been named as the winners of the Faculty KE Award 2013. Expressions asked her about her team’s community outreach programmes.

Who are your fellow winners?

Other members of our KE team are [Dr Chun-hung Chu](#) (Clinical Associate Professor in Community and Family Dentistry) and the following BDS students: Kwan-ning Ma, Stephanie YT So, Yau-sing Wong, Pui-chung Lee, Chao Zhong, Janet Chan, Tiffany CL Chan, Tsz-yan Li, Kenneth CK Wong, Kenneth KC Chow, and Kenneth KH Yung. I am happy to have witnessed our Faculty students showing such dedication and commitment to volunteering and putting their knowledge into practice within the local community.

What was your KE project about?

The KE project was called “Improving children’s oral health and development by terminating poor oral habits and promoting healthy ones”. The overall aim was to maximise young children’s oral health, starting from birth to 6 years. With parental involvement, we wanted to encourage early and routine oral hygiene practices and dental visits, while discouraging habits such as thumb sucking and bed-time bottle feeding, which can affect physical development of the mouth.

The KE project title is actually the theme of a series of three related oral health educational campaigns, done in consultation with various local organisations. The first two were Student KE Projects that I mentored and were funded by the HKU KE Fund 2011-12 and 2012-13; the third is still

ongoing and is funded by the Health Care and Promotion Fund of the HKSAR Government Food and Health Bureau.



Our campaigns targeted three specific parental groups—namely, pregnant women, the parents of 0- to 3-year-old babies, and 3- to 6-year-old children and their parents. Based on the specific target groups, we chose corresponding platforms: workshops and consultation booths at an antenatal clinic at the Tsan Yuk Hospital; an oral health presentation and individual consultations at a baby expo at the Hong Kong Convention and Exhibition Centre; and children’s check-ups and parent meetings at several local kindergartens.

What does winning this KE award mean to you?

Gaining the HK\$50,000 award can encourage our team members to continue with extracurricular educational campaigns. Specifically, we plan to extend the 2011-12 KE project on improving the oral health knowledge of antenatal women attending the Tsan Yuk Hospital. We also offered consultations with parents at the Faculty’s annual World Oral Health Day exhibition. Furthermore, we will expand our educational efforts in kindergartens by also targeting the kindergarten staff.

For the participating BDS students, the award offers a chance to further improve skills in transferring their academic knowledge to benefit the public and in event planning and communication. At the same time, the additional practical experience will give them a better understanding of the knowledge they have acquired during the BDS programme. ■

Blogs of these projects can be found in the Faculty’s Facebook blog site at <http://tiny.cc/30jerw>.



Looking forward



Reinventing Our Future was the theme of the annual Faculty Retreat for academic staff, which was held this year on 24 May 2013 at the Clearwater Bay Golf and Country Club. The full-day event included group discussions about new developments for the future and innovating

Faculty management. The Guest-of-Honour, Prof SP Chow (HKU Pro-Vice-Chancellor for University Relations) gave a presentation called "My vision of HKU", which charted HKU's development from its early days, expansion phase, and now internationalisation.

International collaborations



Signing ceremony: On 15 April 2013, the HKU Faculty of Dentistry entered into a 5-year Agreement for Academic Collaboration with the School of Stomatology, Shandong University, China. The

agreement paves the way for launching joint ventures such as research projects; exchange of faculty staff, researchers, and students; and organisation of conferences and academic meetings. Signing on behalf of the Faculty was [Dean Lakshman Samaranayake](#) and signing on behalf of the School of Stomatology, Shandong University, was Dean Xin Xu (pictured, L to R).

Educational exchange: The Faculty hosted an academic visit from the College of Dentistry, National University, Manila, Philippines, on 12 April 2013. The 11-member delegation,



led by their dean's representative Dr Napoleon Navarette, was given a tour of the Prince Philip Dental Hospital and an introduction to the problem-based learning approach of the HKU dental curriculum. The visit concluded with a tea reception, which provided an opportunity for informal discussion of future academic cooperation.

Increasing understanding: Also during the first half of 2013, Prof Lakshman Samaranayake represented the Faculty in signing collaborative agreements with three overseas institutions. These were the MS Ramaiah Dental College and Hospital of the MS Ramaiah Academy of Health and Applied Science, India; the Department of Surgical Sciences, Radiology, and Public Health of the Università degli Studi di Brescia, Italy; and the School of Dental Medicine, Tsurumi University, Japan (renewal of agreement).

IAP Biennial Congress 2013:

The 14th International Academy of Periodontology Biennial Congress was co-hosted by the HKU Faculty of Dentistry and Guangdong Provincial Stomatological Hospital, and took place at the Grand Hyatt Shenzhen, China, from 31 May to 1 June 2013. In addition to attending oral and poster presentations, the 450 delegates learnt of the latest developments in implant dentistry and periodontology from 14 world-renowned guest speakers.



Sharing engagement know-how

The Faculty's first two student teams that won HKU knowledge exchange (KE) grants have been encouraging fellow students to take part in KE projects to benefit the community, while gaining extracurricular learning opportunities.

Leaders of the two student KE project teams of 2011-12 shared their KE experience with dental undergraduates and postgraduates at the Faculty's inaugural Student KE Experience Sharing Session, on 3 May 2013. Practical tips included good budgeting and accounting; careful choice of target group, external KE partner, and venue; and good preparation and teamwork.

Baby oral health



Ms Candy KN Ma (BDSV) spoke about her team's project "Promotion of children's oral health through knowledge-building among antenatal women", which took place at the Tsan Yuk Hospital and was mentored by Dr Yanqi Yang (Clinical Assistant Professor in Orthodontics).

Listening to feedback, being flexible, and timely problem-solving were key to achieving the aim of helping pregnant women learn about baby oral health and oral health during pregnancy.

After noting poor attendance at initial workshops, the student team sought feedback from the attendees and planned extra individual, tailor-made consultations, which proved a success and targeted more than 100 women. In the end, the project provided a "blueprint" to further transfer dental knowledge between dental professionals and pregnant women, said Ms Ma.

In response, a KE partner representative, Ms Alice Choi, Department Operation Manager of the Queen Mary Hospital and Tsan Yuk Hospital, said that the feedback from the women was "very positive", and because oral health education is not included in antenatal classes, she looked forward to further collaborations with the Faculty.

Science in your mouth

Dr Shirley CC Kot (BDS 2012) spoke about her team's project "Bridging dentistry with secondary school science in Hong Kong", which was mentored by Dr C Jayampath Seneviratne (then Research Assistant Professor in Oral Biosciences, now at the National University of Singapore). Through small-group problem-based learning tutorials and hands-on practicals, the BDS students used dental topics and real-life examples to introduce scientific concepts to 55 Form-1 and Form-2 pupils at the Good Hope School and the Immaculate Heart of Mary College.

Good delegation and teamwork and thorough practice beforehand were particularly important factors. "Good preparation means half the success," said Dr Kot. "The majority of the participants enjoyed the workshops and thought that the workshops helped them understand more about dentistry and oral health."

Mr Ken Li, from the Hong Kong Federation of Youth Groups—the KE partner that helped liaise with the schools—valued the Faculty student KE programme, saying that the lessons were professional and inspirational, and got the pupils interested in and motivated to learn about science as well as dentistry. ■



The two Student KE Projects were supported by the HKU KE Fund 2011-12, and the Student KE Experience Sharing Session was supported by the HKU KE Fund 2012-13. The evening's presentations are available on the Faculty's YouTube channel, at <http://www.youtube.com/user/hkufacdent> (first QR code). Details of all Student KE Projects have been uploaded to a special section of the Faculty's Facebook page, at <http://tiny.cc/30jerw> (second QR code).



First-year experience

The academic year 2012-13 was the first time that students were admitted to the 6-year BDS programme, entering HKU with the new Hong Kong Diploma of Secondary Education. At the start of the summer holiday, *Expressions* asked Class of 2018 about their experience of the first year of the 6-year curriculum.

Mr Dennis TF Tse (BDS1b)

My first-year experience at the HKU Faculty of Dentistry has been flourishing. Although the BDS1b programme presented many challenges, like establishing good study habits and meeting new classmates, I learned a lot: not only about the general sciences, but also about myself.



Although difficult, this first year at university has allowed me to become more mature and independent. Furthermore, by getting a chance to learn some key skills, I now know that entering the dental field was the right choice for me. The BDS1b was just the beginning of my dental journey and I am excited for what lies ahead.

Ms Crystal PY Mak (BDS1b)



I have found that studying dentistry at the HKU Faculty of Dentistry requires self-discipline, for much of the time is devoted to problem-based learning and self-directed learning, and minimal time is devoted to theme-based seminars. Hence, the first year has actually eased the transition from spoon-feeding in secondary

school to independent learning, and this skill will be more and more crucial to being a good dental student and, later on, a practising dentist.

The clinical sessions never fail to fascinate me because they are always so interesting. I would like to add that other than merely studying, students have plenty of opportunities to do extracurricular activities, both at the Prince Philip Dental Hospital and also on the main HKU campus. This year, for example, I have been an executive committee member and I have joined service trips, and these activities have been very enjoyable.



Mr Vincent MK Kwok (BDS1b)

In addition to the Faculty components of the BDS first year, we took four HKU common core courses, each with its own heavy workload. Although there were some problems in scheduling common core tutorials, without the common core courses we may not have had a chance to get familiar with the HKU main campus. Furthermore, the Core University English course has provided us with useful concepts for our future study, like avoiding plagiarism.



As for problem-based learning at the Faculty, we are all still exploring and getting used to this new learning method, which includes self-directed learning. The new methodology and experiences, as well as theme-based sessions, various Faculty clinics, and practicals at the HKU Li Ka Shing Faculty of Medicine's Sassoon Road campus, are really giving us fruitful knowledge and skills towards our dental careers. ■

Community classroom



BDSII students took a few hours off from revising for examinations when they attended the Mid-year Reunion Dinner of the HKU Dental Alumni Association – Faculty of Dentistry Mentorship Programme 2012-13 on 5 June 2013, supported by the HKU KE Fund 2012-13. Mentee pairs had a chance to meet other mentors and also heard from one mentor and one mentee about their mentorship experiences so far.



Dr Ka-ho Chan (BDS 1994)

I have enjoyed the 2012-2013 HKUDAA – Faculty mentorship scheme so far with my mentees, Tracy and Andrew. I have shared my experience in dentistry with them, and I have invited them to visit my clinic as observers to learn about the “real life” of a dentist. I also invited them to join in some kindergarten

voluntary service work to teach more than 600 preschool children about proper oral hygiene. We have had some good meals and interesting discussions, too. The enthusiasm of Tracy and Andrew to learn about dentistry outside their classes has impressed me very much. It is my honour to be their mentor.



Ms Tracy CS Lee (BDSII)

We have been fortunate to have the opportunity to take part in the HKUDAA – Faculty mentorship programme. The reason why I have truly enjoyed this programme is clear and simple: my mentee partner and I have gained a precious relationship with Dr Chan, a

generous and friendly private dentist. He has been explaining how things work in private practice when we visit his clinic.

In addition, he has provided us with ample chances to train our communication skills by allowing us to teach kindergarten children about oral hygiene. Just as people say, experience is the mother of wisdom. Through practice, we finally managed to express ourselves in a simple and lively way to suit the needs of our little audience members.

Aside from the extracurricular learning, what has inspired us most has been Dr Chan's emphasis on moral values and a positive attitude towards life and career. He has taught us through words, as well as by example. These lessons are applicable not only to our future career, but also to our daily lives. As novices in dentistry, we BDS students should not limit ourselves to clinical and academic work; we should also expose ourselves to a variety of community activities to build up a positive character.

On behalf of this year's mentees, I wish all future mentees will take advantage of and benefit from this programme and I thank all mentors for their invaluable efforts. ■



Alumni achievements

Congratulations to the following alumni, who have informed the Faculty of their recent successes since graduating from HKU and are now giving back to dentistry through service and by educating the next generation. Please e-mail <dentke@hku.hk> to keep us informed of alumni news and achievements, or to send the Faculty a special message for upload to the alumni website at <<http://facdent.hku.hk/hkudaa>>.



Dr Sreenivasan Narayanan (MDS [Oral Max Fac Surg] 1998), pictured left with his wife Mrs Mahimaa Narayanan, has recently received the Dr Charles Cooper Award in the School of Dentistry at the University of Detroit Mercy, Detroit, Michigan, USA, where he now works. This is the top award given by final-year dental students to a faculty member

in the School of Dentistry for outstanding teaching contributions. Since joining the faculty in 2010, Dr Narayanan has initiated and introduced a number of new and novel teaching methods into the pre-doctoral

oral and maxillofacial surgery curriculum, and this has been very much appreciated by his students.

Since graduating from HKU in 1998, Dr Narayanan has been involved in teaching and clinical practice in the specialty of oral and maxillofacial surgery in different parts of the world (Saudi Arabia, India, and, most recently, the USA). He is a Fellow of the American College of Oral and Maxillofacial Surgeons and currently works as an Associate Clinical Professor and an Attending Oral and Maxillofacial Surgeon in the Department of Oral and Maxillofacial Surgery at the University of Detroit Mercy School of Dentistry. Before this appointment, he was an Assistant Professor and the Program Director of Pre-doctoral Oral and Maxillofacial Surgery at the School of Dental Medicine, Case Western Reserve University, Cleveland, Ohio, USA. ■

Dr Carl KK Leung (BDS 1990; MSc [Implant Dent] 2008) was awarded a Fellowship of the Faculty of Oral and Maxillofacial Pathology of the Royal College of Pathologists of Australasia in February 2013, making him the first and only Chinese person to have been given such a title. Also this year, he was appointed to the Hospital Governing Committee of Grantham Hospital in Aberdeen, Hong Kong. There, he will bring his experience in private health care sector to the public sector.



Dr Leung is taking a leading role to develop the forensic field, not only limited to forensic odontology, but also in various disciplines in forensic science both locally and in mainland China. Notably, he is a member of the Working Group in Disaster Victim Identification of INTERPOL.

Recently, Dr Leung was appointed Honorary Professor in Forensic Science of Tung Wah College, Hong Kong, where he has helped to set up Hong Kong's first 4-year full-time course leading to a BSc in Forensic Science. He has also been elected as the President of the Hong Kong Forensic Science Society and as a central committee member of the Chinese Forensic Medicine Association. ■



Celebrate Your Class Anniversary

Want to gather with old friends for an HKU campus tour, dinner & tea gatherings, hiking, community service...?

The HKU Alumni Office can help. Contact Ms Janice Chan, <alumni@hku.hk>, and check out the HKU Tips for Organising Reunions at <www.alumni.hku.hk/reunions>.

• Please also share your Class Reunion events announcements and events coverage with the Faculty Knowledge Exchange Unit, <dentke@hku.hk>.

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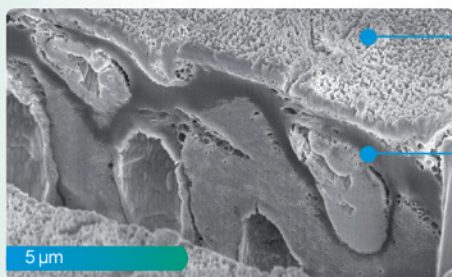
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In vitro studies show that a hydroxyapatite-like layer forms over exposed dentine and within the dentine tubules:^{7,9,10,12,13}



Hydroxyapatite-like layer **over** exposed dentine

Hydroxyapatite-like layer **within** the tubules at the surface

Adapted from Earl *et al.*, 2011 (A).¹³ *In vitro* cross-section SEM image of hydroxyapatite-like layer formed by supersaturated NovaMin® solution in artificial saliva after 5 days (no brushing)¹³



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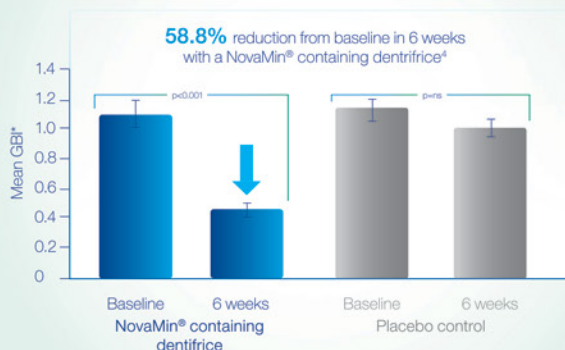
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Adapted from Tai *et al.*, 2006.⁴ Randomised, double-blind, controlled clinical study of in 95 volunteers given NovaMin® containing dentifrice or placebo control (non-aqueous dentifrice containing no NovaMin®) for 6 weeks. All subjects received supragingival prophylaxis and polishing and were instructed in brushing technique.⁴ *GBI scale ranges from 0–3.



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