Spotlight on Hong Kong’s oral health

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The public face of the faculty

By Lakshman Samaranayake, Dean

One of the missions of the HKU Faculty of Dentistry is to achieve excellence in engagement—with society, policymakers, patients, and the dental community—in Hong Kong, the region, and beyond. By bringing together all stakeholders, we make sure our dental services, research, and teaching keep pace with the evolving needs and expectations of the population.

Silver opportunities

A perfect opportunity for us to further strengthen ties between the faculty and the local community will be during the 25th anniversary of our establishment in 2007. Our dent25 Silver Jubilee celebrations will include community-based ventures to improve public education, such as Roving Exhibitions, inspired by the success of the two Roving Exhibitions held last January. And in the week of the dent25 Congress—the Second International Conference on Evidence-based Advanced Dentistry—in November 2007, we will hold a series of Open Days at the Prince Philip Dental Hospital to let the public know about the faculty’s activities and achievements.

Our celebrations actually start this year, with a public Silver Jubilee Concert on 4 November 2006 in the Hong Kong Cultural Centre Concert Hall, given by accomplished pianist sisters Mary, Enloc, and Melody Wu. We invite you to attend this and other dent25 Silver Jubilee events that mark this important landmark in the history of Hong Kong’s only dental school.

Finally, this issue of Expressions focuses on dental public health, Hong Kong’s oral health status, and the challenges related to improving oral health in the community. It also includes a Patient Page on oral hygiene, which we hope you will share with your patients. Happy reading!

Check out the dent25 Silver Jubilee Website @ dent25.hku.hk

- Silver Jubilee Events: Workshops, Roving Exhibitions, Open Days
- dent25 Congress: Second International Conference on Evidence-based Advanced Dentistry
- dent25 Banquet and Silver Jubilee Concert

For further details about the dent25 Silver Jubilee, e-mail dent25@hku.hk
For advance details of the dent25 Congress and Banquet, e-mail dent25cb@hku.hk

Expressions is published three times a year by the Faculty of Dentistry, The University of Hong Kong, for its faculty, staff, students, alumni, affiliates, and friends. News items, announcements, details of meetings, congress coverage, articles, comments, and feedback are welcome. Please e-mail <tlane@hkusua.hku.hk>. Inclusion is not guaranteed and submissions may be edited.

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Faculty of Dentistry
The University of Hong Kong
Tomorrow’s Dentistry......Today

www.facdenthk.org

Cover photo credit: HK Tourism Commission
Dr Hai-ping Tan, a fourth-year PhD student from the HKU Faculty of Dentistry, has won this year’s HKU Most Impressive Achievement Competition.

Under the supervision of Prof Edward CM Lo and Dr John Dyson, Dr Tan conducted a 2-year randomised controlled trial on the prevention of root caries among 227 people aged 60 to 89 years living in homes for the elderly in Hong Kong. She showed that individualised oral hygiene instructions were more effective if they were combined with 3-monthly applications of sodium fluoride or chlorhexidine varnish, or with annual applications of silver diamine fluoride. Root caries can be successfully prevented by these three “simple, non-invasive, and low-cost methods”, Dr Tan concluded.

This research work gained Dr Tan the 2006 International Association for Dental Research/Colgate Research in Prevention Travel Award for the Asia region (see also page 5)—an accomplishment judged by the HKU awarding panel to be the most important student success during the 2005-2006 academic year.

Super student: HKU Vice-Chancellor Prof Lap-chee Tsui (left) names Dr Hai-ping Tan HKU’s most impressive student at a ceremony on 29 April 2006

Strengthening ties with Thailand

The HKU Faculty of Dentistry has signed a Memorandum of Understanding with the Faculty of Dentistry, Thammasat University, Rangsit Campus, Thailand.

The Memorandum of Understanding is intended to strengthen academic links and friendships between the two faculties in terms of “scholarly interaction, cultural interchange, cooperative research, and other forms of academic collaboration, as well as possible student and staff exchanges”.

A 5-year Agreement for Collaboration containing details of the alliance has also been signed by the Deans of the two faculties, Prof Lakshman Samaranayake and Dr Yupin Songpaisan.

Established in 1934, Thammasat University is the second oldest university in Thailand and is widely considered to be one of the country’s most prestigious universities.

News bites

♦ Ushering in dent25: Celebrations for the dent25 Silver Jubilee Year kick off on a high note this year at 7:45 pm on 4 November 2006, at a special fundraising concert given by accomplished pianist sisters Mary Wu, Enloc Wu, and Melody Wu at the Hong Kong Cultural Centre Concert Hall. Concert details can be found on the News page of the faculty website, at <www.facdenthk.org>. Tickets are available from Hong Kong URBTIX outlets, but to make bulk orders and tax-deductible donations, please e-mail the Associate Dean for External Relations, Prof Tak-wah Chow, at <twchow@hkusua.hku.hk>.

♦ dent25 Silver Jubilee souvenir book: A commemorative book, Reflections, will be published to celebrate the faculty’s 25th anniversary next year. Readers who would like to share their experiences, reminiscences, and photographs relating to the history of the faculty in the past quarter of a century are welcome to e-mail Dr T Lane at <tlane@hkusua.hku.hk> by 31 January 2007.

♦ dent25 Silver Jubilee T-shirt design contest: To celebrate its 25th anniversary in style, the HKU Faculty of Dentistry will produce Silver Jubilee T-shirts, and is currently holding a T-shirt design contest to select artwork for the front of the shirts. All faculty students are welcome to enter the competition. Contest guidelines can be found on the News page of the faculty website, at <www.facdenthk.org>. 

Student impresses HKU

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Bristling with awards in Brisbane

It seemed like a clean sweep for faculty staff and students during the prize-giving ceremonies at the 2006 General Session of the International Association for Dental Research (IADR), held between 28 June and 1 July 2006 in Brisbane, Australia.

International research recognition

The HKU Faculty of Dentistry—the only institution to receive more than one prize—won a total of five awards for research submitted for presentation at the meeting. Congratulations to all our prize winners!

- **IADR/Colgate Research in Prevention Travel Award**
  Awarded to Dr Hai-ping Tan (PhD student under the supervision of Prof Edward CM Lo and Dr John Dyson) for research titled *Prevention and arrest of root caries in institutionalized elders*.
  [Top-right photo: Dr Hai-ping Tan (middle) receiving plaque for IADR/Colgate Research in Prevention Travel Award from Prof Takayuki, President of the IADR (left), and a representative of Colgate-Palmolive]

- **IADR/Lion Dental Research Award for Junior Investigators (Periodontal Research)**
  Awarded to Dr Andrew CC Chan (MDS student under the supervision of Dr Li-jian Jin and Dr Esmonde Corbet) for research titled *Periodontal risk spider-web for periodontal assessment in Hong Kong Chinese*.
  [Second photo on right: Dr Andrew Chan (left) and Dr Esmonde Corbet in front of their group’s award-winning poster on the spider-web method of periodontal risk assessment]

- **IADR/GlaxoSmithKline Innovation in Oral Care Awards**
  Awarded to Prof Cun-yu Wang (Professor of School of Dentistry, University of Michigan, and Honorary Professor of the HKU Faculty of Dentistry) and Dr Li-jian Jin for research titled *Targeting IKK/NF-κB for periodontitis*.
  [Third photo on right: Prof Cun-yu Wang (left) and Dr Li-jian Jin]

- **IADR Southeast Asian Division Travel Award (First Prize)**
  Awarded to Dr Ricky WK Wong and Prof Bakr Rabie for research titled *HMG-CoA reductase inhibitors increase bone formation*.
  [Bottom main photo: Dr Ricky Wong (left) and Prof Bakr Rabie]

- **Procter & Gamble Junior Investigator Award (First Prize for Best Presentation)**
  Awarded to Dr Hai-ping Tan for a presentation titled *A randomized controlled trial on root caries in institutionalized elders* (co-presenters: Prof Edward CM Lo, Dr Luo Yan, Dr John Dyson, and Dr Esmonde Corbet)

Late breaker

In addition to the above accolades, research conducted by Dr Ricky WK Wong and Prof Bakr Rabie in the Discipline of Orthodontics was chosen for inclusion in the Late-breaking News session, where selected researchers presented their latest findings, made in the months just before the conference. Only 12 from the more than 60 submissions of late-breaking findings were chosen by the review committee. Dr Wong and Prof Rabie discovered that Puerarin extract, taken from the *Pueraria* plant (photo inset) and used in traditional Chinese medicine, could increase local bone healing by 554%.

The IADR is the main association for dental researchers worldwide. It holds an annual research meeting and publishes key journals in the field, including the high-impact Journal of Dental Research. The next IADR meeting will take place from 21 to 24 March 2007 in New Orleans, Louisiana, USA (for details, see <www.dentalresearch.org>).
Hong Kong was one of the 17 cities around the world to be selected by Nobel Biocare in their World Tour 2006 Beautiful Teeth Now roadshow, and the HKU Faculty of Dentistry was asked to take part in a live surgical teledentistry demonstration.

Faculty in action
The Hong Kong leg of the Nobel Biocare World Tour 2006 was held on 3 to 5 September 2006, and was designed to let international and local dental professionals share ideas and knowledge, as well as learn about the latest products and techniques in crowns, bridges, and implants developed by Nobel Biocare.

As part of the afternoon events on the last day of the congress, a live dental implant demonstration was performed by Dr Ken WK Chiu, Assistant Professor in Oral and Maxillofacial Surgery, assisted by faculty and staff at the Prince Philip Dental Hospital. The whole implant surgery was successfully broadcast in real-time to the congress audience at the Hong Kong Convention and Exhibition Centre in Wanchai.

Prof Lim K Cheung, Chair Professor in Oral and Maxillofacial Surgery, helped organise the demonstration and was the congress host for that session. He was also a member of the Nobel Biocare expert panel during the Hong Kong leg of the world tour. Although the broadcast destination was still within Hong Kong, this was the first time that the faculty had participated in distance education by live teledentistry. “We now have valuable experience for possible repeat performances in the future,” says Prof Cheung.

Industry involvement in implantology
The HKU Faculty of Dentistry has entered into an Institutional Support Agreement with Nobel Biocare, effective from 3 September 2006, to help the faculty set up its much-needed facilities for implant dentistry and research.

The approximately HK$1 million donation from Nobel Biocare will allow the university and faculty “to promote the study of dental implants and prosthetics by dental school students,” according to the Agreement. The faculty is already actively engaged in instruction and research in these fields, has just started offering a Master of Science in Implant Dentistry programme, and is currently raising funds to open Hong Kong’s, and Asia’s, first public Implant Dentistry and Research Centre.

“The generous support from Nobel Biocare is timely, as one of its immediate purposes is to allow the faculty to renovate and equip earmarked clinics to establish our Implant Centre,” says Dean Samaranayake. “We are extremely grateful for this donation and are now another step closer to offering public dental implant services.”

The greatness of grapefruit
Research of Prof Bakr Rabie and Dr Ricky WK Wong showing that naringin—the chemical responsible for grapefruit’s bitterness—can switch on bone-forming genes in rabbits is now featured in a public exhibition on the second floor of the Hong Kong Science Museum.

The exhibition, titled Grapefruit Forms Bone?, was formally opened on 8 September 2006 at a ceremony that was officiated by Prof Pak-ming Hui, Museum Advisor; Mr Chee-kuen Yip, Museum Chief Curator; and Dean Samaranayake.

Readers are encouraged to visit this intriguing exhibition, which will run until 7 January 2007, as the work presented may have far-reaching implications on bone graft procedures. Museum opening times and admission fees can be found at the Science Museum website at <hk.science.museum>.

Prof Rabie and Dr Wong will also deliver a public lecture at the Science Museum about the research behind their exhibition, at 2:30-4:00 pm on 2 December 2006.
researchers including several faculty orthodontists.

For 3 years, Dr HM Hou and colleagues studied X-rays of the head and jaws of 67 Chinese patients who wore an acrylic mandibular-advancement device for at least 4 days a week for the management of sleep apnoea. The lower anterior facial height increased in years 1 and 2, the mandibular plane angle increased in years 1 and 3, and the overjet and overbite decreased in year 1, but only by 0.3 mm and 0.2 mm, respectively. Although statistically significant, these effects are “relatively small”, say the authors.


Already in safe hands
Presterilising gloves by gamma irradiation does not help reduce the complication rate of wisdom tooth surgery, faculty researchers have found.

Dr Ken WK Chiu and fellow oral and maxillofacial surgeons from the faculty randomly divided 275 patients undergoing lower wisdom tooth removal at the Prince Philip Dental Hospital into two groups in which surgeons wore either presterilised gloves or regular, clean latex ones. None of the patients smoked, drank, or currently used antibiotics. One week later, the two groups had similar high rates of healing and low rates of acute socket inflammation and infection.

The researchers suggest that minor oral surgery can use clean gloves, which are cheaper than presterilised ones—a finding with “significance to health authorities in developing countries”. [Chiu WK, Cheung LK, Chan HC, Chow LK. A comparison of post-operative complications following wisdom tooth surgery performed with sterile or clean gloves. Int J Oral Maxillofac Surg 2006;35:174-9.]

Self-help groups need help
Some patients need more attention than others after periodontal therapy, according to periodontists from the faculty.

Dr Wai-keung Leung and colleagues followed up 97 Chinese patients who had received periodontitis treatment 5 to 12 years previously at the Prince Philip Dental Hospital. Despite instructions on appropriate self-care, a total of 256 teeth had been lost—195 reportedly due to peri-odontal reasons. Smoking, time spent on oral hygiene, time since therapy, and age were associated with an increased likelihood of tooth loss, whereas interdental brush use and education level were associated with a decreased likelihood.

Smokers, older patients, and those with a low education level should receive clinic-based periodontal support, the authors conclude.


Chinese herbs: taking root-stock
Gusuibu, a rhizome preparation of Drynaria fortunei that is used in traditional Chinese medicine for bone-related diseases, can enhance bone formation in vivo, two animal studies done by Dr Ricky WK Wong and Prof Bakr Rabie have shown.

In the first study, the two orthodontists applied collagen grafts containing Gusuibu extract to lesions made in skulls of live rabbits. After 2 weeks, collagen plus Gusuibu caused 24% and 90% more bone growth than did bone grafts and collagen grafts, respectively, suggesting that this mixture could be a potential bone grafting material. In the second study, adding Gusuibu extract to the drinking water of mice for 5 weeks led to a 6.45% increase in tibial bone-to-tissue volume ratio when compared with controls; furthermore, the number of bone trabeculae was 90% more than that of bone trabeculae in controls, indicating a greater bone density.

The ability of Gusuibu to stimulate bone cell activity is also discussed in a useful review by the same authors on the effects of various traditional Chinese medicines on bone formation. The review was recently published in the Journal of Oral and Maxillofacial Surgery.

Long service awarded

Five members of the HKU Faculty of Dentistry were among the 20 senior staff who were honoured this spring by The University of Hong Kong for 25 years of service.

Faculty members receiving Long Service Awards were Dr Esmonde Corbet, Prof Brian Darvell (pictured, back-row 5th), Dr John Dyson (front-row 7th), Prof Nigel King (front-row 5th), and Mr Wayne Robinson (back-row 6th). Officiating at the presentation ceremony was HKU Vice-Chancellor Prof Lap-chee Tsui (front-row 4th).

“The faculty deeply appreciates the hard work and unfailing loyalty of these outstanding individuals,” says Dean Samaranayake. “They have been, and are, a key reason for the faculty’s continued success.”

Recent appointments

♦ Dr Li-jian Jin, Associate Professor in Periodontology, has been appointed as Associate Dean for Mainland and Global Affairs for the period of 1 July 2006 to 31 December 2007 (see also page 12).
♦ Dr John Dyson, Associate Professor in Oral Rehabilitation, has been appointed as Associate Dean for Undergraduate Education for the period of 1 July 2006 to 31 December 2007.
♦ Dr Cynthia KY Yiu has been retitled from Assistant Professor to Associate Professor in Paediatric Dentistry starting from 19 June 2006. She was also appointed as Assistant Dean (Undergraduate Education) in July 2006.

For the Record

♦ The Hong Kong Research Grants Council has awarded Competitive Earmarked Research Grants (2006-2007) to Prof Bakr Rabie to conduct research on a bone-borne distractor for skeletal class II malocclusion, and to Prof Lakshman Samaranayake for a project on Candida biofilms.
♦ Dr Kevin HK Yip has received a 2006 Listerine Research Award from Pfizer Corporation (USA) to conduct a biofilm research study.

In February, Dr Yip also published a textbook titled Tooth Erosion: Prevention and Treatment with co-authors Roger J Smales and John A Kaidonis.
♦ A research article written by orthodontists Dr Ricky WK Wong and Prof Bakr Rabie, was the fifth most downloaded article from the British Journal of Oral and Maxillofacial Surgery in the last quarter of 2005, according to the journal publishers; the article is titled Early healing pattern of statin-induced osteogenesis (2005;43:46-50).
♦ The third edition of the popular text, Essential Microbiology for Dentistry, written by the Dean, was published in August 2006. In this new edition, Prof Lakshman Samaranayake has added a reader-friendly Q & A feature and included current topics such as SARS and avian influenza. His textbook has also recently been translated into Polish and Korean.
♦ Dr Li-jian Jin has written four book chapters related to periodontology. Details of these chapters, and of the books mentioned in this section, can be found in the online article HKU Faculty of Dentistry writes new chapters in dentistry in the News section of the faculty website at <www.facdenthk.org>.

Book smart:
Dean Samaranayake (right) presents copies of the Polish and Korean translations of his textbook, as well as the revised English edition, to HKU Vice-Chancellor Prof Lap-chee Tsui.
The prevalence and severity of common oral diseases among adults in Hong Kong compare favourably to those of many western countries with a similar economic level of development. Moreover, compared with the rest of the world, the dental caries (tooth decay) status of permanent teeth of school children in Hong Kong can be considered to be good. Fewer than 10% of 12-year-olds have untreated decay and, on average, less than one tooth per child in this age group has ever had tooth decay.

However, the situation among preschool children is much worse: about half of 5-year-olds have untreated decay and a quarter have four or more decayed teeth. The diversity among different socio-economic groups is large: young children from low-income families have more than twice the number of decayed teeth as peers from the highest-income families.

One reason for infrequent dental visits and poor oral health status in Hong Kong is the low value or priority many place on good oral health. More oral health–promotion activities that use effective psychosocial approaches are needed to raise the social value of having good oral health, but this will take time.

Subsidised care is needed
Another reason for disparities in Hong Kong’s oral health is people’s ability or willingness to pay for dental care services. On the one hand, many are ready to pay tens of thousands of dollars for orthodontic, implant, and prosthetic dental treatments. On the other hand, many queue outside the Prince Philip Dental Hospital in the early morning in the hope that they can be accepted as teaching patients and receive close-to-free dental treatments.

Hong Kong currently has no subsidised organised dental care service for special-needs groups. Disadvantaged groups need such a service, which should emphasise preventive and simple restorative treatments. Only then can we reduce the gap in the oral health status between these members of society and the better-off majority.

Adequate support from the government and charities is clearly essential. However, having a caring attitude towards needy groups in Hong Kong is also required, and the dental profession can certainly provide this.

Expressions 2006, Issue 3

Neglected:
Elders living in residential and nursing homes have poor oral health

Attitudes need to change
Use of dental services by Hong Kong’s population, except primary school children, is generally low. Only about a quarter of middle-aged adults and less than a tenth of young children and elders pay regular dental visits. In industrialised countries, usually one-half to two-thirds of adults regularly visit a dentist.

Diversity is common in Hong Kong. Great differences in values, behaviours, living conditions, and wealth can be seen among the population. A dental ‘check-up’ of the city reveals that oral health and oral health-related behaviours are no exception.
Don’t get left behind!

Catch up, and keep up at the Oral Health & Science Seminars

Every Wednesday, 6:00 pm-7:30 pm, PPDH

Check out the programme & apply for a season ticket @ www.facdenthk.org/cme

Opening up a world of possibilities

The University of Hong Kong is one of the top 40 research-led universities in the world and currently educates more than 20,000 undergraduates and postgraduates from 48 countries.

As part of the University’s ambitious expansion and globalisation plan, the HKU Faculty of Dentistry is extending its undergraduate dental curriculum from 5 to 6 years and expanding its research and postgraduate teaching programmes. So we’re now looking for clinical/non-clinical Professors and Associate Professors. If you have the talent to join our top-class international dental faculty, we’d like to hear from you!

Please e-mail the Faculty Dean, Prof Lakshman Samaranayake: lakshman@hku.hk or log onto www.facdenthk.org for more details.

Postgraduate Programmes 2007-2008

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• Periodontology
• Implantology

Faculty of Dentistry, The University of Hong Kong
Website: www.facdenthk.org

For information: jhschan@hkucc.hku.hk
Dental Public Health is the branch of dentistry that specialises in the prevention and management of dental diseases within the population and the promotion of oral health through organised community efforts. Dentists who specialise in this discipline deal with the oral health and diseases of communities as a whole rather than those of individuals.

Dental Public Health primarily involves monitoring the oral health of a population, identifying its oral health needs, providing community dental services, fostering policies that promote oral health, and evaluating oral health services in the community.

At the HKU Faculty of Dentistry, teaching in Dental Public Health begins at the undergraduate level—which includes a research project on an aspect of community oral health—through to postgraduate level and beyond.

Undergraduate course
The dental public health component of the undergraduate course provides students with a basic understanding of behavioural sciences, clinical communication skills, preventive dentistry, oral epidemiology, biostatistics, medical sociology, public health dentistry, professional ethics, and practice management.

In year 4, students are required to conduct a dental community health project in groups, under the guidance and supervision of a teacher in the discipline. Teams plan their project in weekly sessions and they are given 1 week to conduct research in a community setting, usually at a site other than the Prince Philip Dental Hospital. Students then write up a report and deliver an oral presentation of their project.

Past student teams have studied topics such as people’s oral health knowledge and behaviours, and oral health status; provision of oral health education and outreach dental services; and people’s dental practices (see page 13 for titles of this year’s student projects).

Taught postgraduate courses
We offer two postgraduate courses in the specialty: a 1-year Postgraduate Diploma in Dental Surgery and a 2-year Master of Dental Surgery. Students can choose to study full-time or part-time. The two courses enable students to achieve a basic level of knowledge and competency necessary for specialised practice in Dental Public Health through course attendance, supervised practice in community dentistry, and, for the Master degree, a supervised research project.

Research postgraduate courses
Members in the Discipline of Dental Public Health are very active in conducting high-quality research in Public Health and Healthy Ageing—two university-wide Strategic Research Themes. Accordingly, we offer 2-year Master of Philosophy (MPhil) and 4-year Doctor of Philosophy (PhD) courses in oral epidemiology, oral health–related quality of life, dental biostatistics, dental clinical trials, and public health dentistry.

More information about the Public Health and Healthy Ageing Research Group can be found on the webpage <www.facdenthk.org/research03.htm>.

Continuing education
We also offer various modular courses in Dental Public Health throughout the year to dental practitioners, and contribute regularly to the faculty’s Oral Health and Sciences Seminars.

Prof Edward CM Lo (e-mail: edward-lo@hku.hk) is the faculty’s Programme Admissions Advisor in Dental Public Health and Dr Colman McGrath (e-mail: mcgrathc@hkucc.hku.hk) is Associate Professor in Dental Public Health.
In the Chair

Dr Li-jian Jin

In July 2006, Dr Li-jian Jin was appointed as the faculty’s first Associate Dean for Mainland and Global Affairs. He will be responsible for leading efforts to develop deeper relations between the faculty and key dental schools in China and around the world. Expressions asked Dr Jin about his new appointment.

Q You’ve already been active in promoting links with mainland China. How will having this associate deanship help with this and other global links?

As never before, globalisation and integration have become crucial goals for international universities like HKU so that they can fulfil their established missions. With this new appointment, I will commit myself to helping the faculty build and maintain clinical, teaching, and research excellence, and accomplish professional and community engagement.

Q What strategies will you use to increase the visibility of the faculty beyond Hong Kong?

The faculty has currently secured a reputation as one of the key dental institutions in the Asia-Pacific region. Given the strengths and advantages of our faculty, we should seek more opportunities for academic development and research collaboration as well as industry collaboration, and establish partnerships to promote our postgraduate programmes and continuing education courses.

Q How will you achieve these goals?

An appropriate plan would be to work out how to further deepen academic links with major dental schools in China and other parts of the world, by establishing visiting professorships, enhancing inter-institutional student and staff interactions, and alumni networking.

Q Dentistry in China: fast facts

- According to the Ministry of Health, mainland China has about 38,000 registered dentists.
- The ratio of dentists to the population is 1:33,000 (compared with 1:2000 in developed countries, 1:1600 in the USA, 1:800 in Sweden, and 1:4000 in Hong Kong, which has about 1700 registered dentists).
- In China, 50% of adults and 70% of children have decayed teeth, and more than 90% of people have periodontal disease.
- China would need to construct 10 times as many dental hospitals as it has now, to provide similar coverage to developed countries in terms of dental treatment and protection.
- The HKU Faculty of Dentistry has already forged some strong ties with mainland China, with principal collaborating institutions in Beijing, Shanghai, Guangzhou, Chengdu, Xian, and Wuhan. Many HKU Faculty of Dentistry staff hold honorary appointments in mainland universities and editorships or memberships of editorial boards of mainland dental journals; for more details, visit the faculty website at <www.facdenthk.org/china00.htm>.


Q How will the faculty benefit from stronger ties to mainland China?

Strengthening ties with mainland China will definitely bring more opportunities for the faculty to recruit top undergraduate and postgraduate students, engage in fruitful joint research projects, increase professional development, and start joint ventures and alliances in various dental and paradental education programmes, including continuing education courses.

Q What’s the faculty’s role in the wider world?

As the only dental school in Hong Kong, our faculty plays a unique role in bridging China/greater China and the wider world. In a place where ‘East meets West’, we’re in a perfect position to establish a platform to facilitate and promote cross-cultural interactions in dental education, research, clinical activities, and professional engagement and development.
Final-year students go places

Earlier this year, 49 fifth-year BDS students were spread around the globe in 15 countries, conducting their elective studies in various overseas dental schools. An integral part of the BDS course for more than a decade, the elective visit gives final-year students the opportunity to sample life and education in a dental institution outside Hong Kong. This year, studies were organised in Australia, Cambodia, Egypt, Germany, India, Israel, Korea, Malaysia, Mexico, Singapore, Sweden, Switzerland, Taiwan, the UK, and the USA.

Three BDS V students summarise their experiences and impressions for Expressions on the next page.

Expanding students’ horizons

Dr Philip RH Newsome, Associate Professor in Family Dentistry and Student Elective Programme Coordinator, gives the history behind the elective visits

In most countries, there are close ties between different dental schools and thus ample opportunity for student interaction between schools. Because the HKU Faculty of Dentistry is the only provider of dental education in Hong Kong, it was felt that students could emerge as fully qualified dentists without ever being exposed to an alternative approach, a different way of doing things.

Hence, in 1994, the Student Elective Programme was started in an attempt to fill this gap and expand students’ horizons. Ever since, virtually every final-year BDS student has travelled either singly or in groups to spend 2 to 3 weeks at dental schools around the world.

The programme allows our students to spend time with local students, experiencing their way of life and taking their dental courses. One comment that is commonly made in students’ post-visit reports is that their experiences will stay with them for the rest of their lives. Another is that they have a deeper appreciation of the teaching, facilities, and staff at the Prince Philip Dental Hospital—in other words, they realise how lucky they are to be students here in Hong Kong.

Neighbourhood projects

As in previous years, this year’s BDS IV student community health projects dealt with the oral health care needs of a wide spectrum of the local population.

Sectors of the public studied in the fourth-year projects included moderately mentally retarded teenagers, kindergarten children, and prisoners (see Box). The six project teams presented their findings to the faculty at two oral presentation sessions on 13 and 14 July 2006, hosted by Dr Colman McGrath, Associate Professor in Dental Public Health.

The final reports of the six projects will eventually be archived online in the Dental Library at <lib.hku.hk/denlib/e-resources.html>.

Community health projects 2006

Group 4.1: Oral health care for moderately mentally retarded teenagers
Group 4.2: Oral health problems with retained lower impacted wisdom teeth
Group 4.3: Dental health status of children aged 2 to 4 years in Hong Kong
Group 4.4: Occlusion, orthodontic treatment need and demand of young Chinese adults
Group 4.5: Oral health and mental health: a study of oral health among psychiatric clients and an investigation of psychiatric nurses’ oral health care practices for clients in Hong Kong
Group 4.6: Oral health education for prisoners in Hong Kong
Top-flight dentistry
By Miko CM Lo, BDS V

Bahina de Tortugas is a small town in Mexico with a population of about 2800 people but without a dental service or even a dentist. If people have toothache, they need 2 days to get to the nearest dentist. Luckily, Los Medicos Voladores (The Flying Doctors) of Mexico and Central America have sent flying dentist Dr Adrian Fenderson, and me, to set up a temporary clinic. Dr Fenderson and his pilot have planned this trip for 6 months.

A 42-year-old woman with a 2-day toothache is the first patient to arrive, even before we finish setting up. Dr Fenderson performs root canal treatment on her upper right incisor; her big smile after the procedure lets me know why Dr Fenderson and his team-mates are willing to go to different rural towns in Mexico, donating their skills and using their creativity with such compromised resources. During the 2-day clinic, we see 27 patients, perform two root canal treatments, extract 19 teeth, and restore 18 teeth.

I am grateful to have been able to widen my horizons in this way and I look forward to volunteering my services to help the needy in China.

Coping in Cambodia
By Frank KW Wong, BDS V

Frank Wong (right) and a tuk-tuk driver in Phnom Penh, Cambodia

Have you ever imagined performing restorative work without proper suction, a rubber dam, or a low-speed handpiece—in a dental school? That was one of the scenarios I faced during my BDS elective visit to the University of Health Sciences in Cambodia—one of the poorest countries in the world, where 36% of the population live in poverty. The situation in the dental school would be worse without the help from various government and non-government organisations that donate money, materials, and equipment to the school, in addition to sending volunteer visiting lecturers. A make-do attitude and steady international generosity are helping this dental school survive.

The trip renewed the meaning of poverty in my mind, particularly during a meeting with villagers as part of an outreach and research programme funded by a Japanese non-government organisation. By the end of the elective visit, I developed a global perspective: to want to know the world and to offer help.

As dentists, we are not only members of the local community, but also members of the global village.

Inspiration in India
By Siu-tung Hui, BDS V

Siu-tung Hui (front left) in Raxaul, India

I went to Duncan Hospital in Raxaul, in the state of Bihar, near the border of Nepal. This is one of the poorest areas in India. The facilities in the hospital are simple and some of the treatments provided might be regarded as suboptimal by our standards. Preventive measures are seldom performed and treatments aim at solving immediate problems—mainly root canal treatment, extractions, and restorations. In general, patients are not aware of oral health issues, while dentists find it hard to keep up with the rapid changes in dentistry and most of their new information comes from outside visitors.

Although there was only a limited opportunity to learn any new clinical techniques or knowledge, the elective visit broadened my vision in dentistry. I gained useful insight into dentists’ attitudes in treating patients and was deeply inspired by their flexibility in successfully providing treatment with very limited resources.
Since graduating last year, I have been working as a Junior Hospital Dental Officer (JHDO) in the Discipline of Paediatric Dentistry and Orthodontics at the Prince Philip Dental Hospital.

Having always been fond of children, I knew I wanted this job in the second year of the BDS course, when I first had the opportunity to treat child patients. People used to tell me my love for children would plummet when I saw them kicking and screaming during treatment; I have to admit there have been times when I have felt a bit helpless. But for the most part, nothing beats the satisfaction I get when I manage to provide treatment and transform an anxious child patient into a happy, patient child.

I enjoy working in the Discipline of Paediatric Dentistry and Orthodontics enormously, as I have built valuable relationships with both colleagues and nurses. I will treasure these relationships for a lifetime. Working as a JHDO has also confirmed my devotion to children's dentistry, and after I complete my JHDO year, I believe I will continue to work with children for the rest of my career.

I am thoroughly grateful to all the BDS teaching staff at the HKU Faculty of Dentistry. The HKU BDS course has equipped me with skills to solve problems actively, and this has contributed largely to how I practise dentistry today.

Review

Dental Hard Tissues and Bonding: Interfacial Phenomena and Related Properties
G Eliades, DC Watts, T Eliades (eds)

Eliades, Watts, and Eliades have produced a succinct and timely review of bonding to dental hard tissue. Their book is conveniently organised into three sections.

Enamel—Amply illustrated with high-quality electron micrographs, the first chapter discusses the mechanism and interfacial phenomena of enamel bonding with etch-and-rinse and self-etch adhesives. The problems associated with bonding to aprismatic enamel using mild, one-step self-etch adhesives are critically addressed. Primary enamel is dealt with in its own chapter.

The discussion of bond strength, however, uses the outdated classification of adhesives into ‘generations’ instead of the etch-and-rinse, self-etch, and glass-ionomer classification, as proposed by Van Meerbeek et al in 2003, which is more scientifically based. Also, interpretation of bond strength data should be accompanied by micromorphological examination of the bonded interface and be supported by controlled clinical studies.

The section ends with an in-depth review of orthodontic bonding to wet enamel with water-insensitive and water-activated orthodontic adhesive resins, which will be of interest to orthodontists.

Dentine—The current classification of dentine adhesives and the mechanisms of dentine bonding are covered well. Although one-step self-etch adhesives are more user-friendly, they are associated with considerable shortcomings and reduced bonding effectiveness. Three-step etch-and-rinse adhesives are still regarded as the gold standard of dentine adhesives.

Also discussed are the relationships between resin photopolymerisation and development of shrinkage stress, as well as a comparison between the effectiveness of conventional and adhesive luting cements to bond indirect aesthetic restorations. The improved optical characteristics of adhesive cements with ceramic and preprocessed composite restorations are rightly emphasised.

Cementum—This book has a final chapter on bonding to cementum, which is rarely reported in the literature.

I recommend this resource to clinicians and dental researchers who are interested in adhesive dentistry.

—Dr Cynthia KY Yiu
Associate Professor, Paediatric Dentistry

Alumni Expressions

The real world
By Reina NY Cheng (BDS 2005)

Since graduating last year, I have been working as a Junior Hospital Dental Officer (JHDO) in the Discipline of Paediatric Dentistry and Orthodontics at the Prince Philip Dental Hospital.

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Just missed the boat

About 25 HKU Faculty of Dentistry alumni participated in this year’s Hong Kong Dragon Boat Festival on 31 May 2006 at Stanley Beach.

The team made a valiant effort, coming fifth in the first round and fourth in the next round, slimly missing the chance to qualify for a place in the final.

Visit the HKU Dental Alumni Association website at <www.hku.hk/dentalum> for more photo-coverage of the boat races, and for the latest alumni news and events.
What motivated you to sponsor faculty research into orthodontics?
Being an orthodontist, I have always envisioned HKU as having a superior orthodontics programme. Already, the faculty has very talented and dedicated researchers, and Profs Urban Hägg and Bakr Rabie, together with fellow researchers and postgraduates, have gained many awards internationally.

I hope this contribution will further augment HKU’s successes in orthodontics research. I also hope it helps encourage others to donate; with sufficient funds, we can catapult HKU to the forefront of international orthodontics research.

What will the donation help postgraduates?
I envisage that some funds will specifically help PhD students to research new orthodontic techniques or refine theoretical and empirical ones.

What will your gift strengthen ties between the HKDA and the faculty?
The relationship between the HKDA and the HKU Faculty of Dentistry is symbiotic and we work towards one goal: to serve the public. While the faculty provides training to dentists, the HKDA tries to make dentists more personable, professional, and better understood by society.

By working together, we create a win-win-win-win situation—that is, the public, dental students, faculty staff at the Prince Philip Dental Hospital (PPDH), and the HKDA are all winners. In recent years, almost all HKU dental graduates become HKDA members. We are intricately entwined.

How will your gift strengthen ties between the HKDA and the faculty?
I received my orthodontic training from the University of Nebraska, USA, in 1982. Immediately after graduation, I returned to Hong Kong to set up my practice. At that time, the PPDH had just started admitting students, and orthodontic training was not even on the drawing board.

During the past few years, I have met many HKU orthodontics graduates and I feel they are well trained and competent. They have received a didactic education from teachers from all over the world and have been exposed to modern techniques. Dental graduates here are open-minded and well prepared for their own practice.

What would you say to others who are thinking of donating to the HKU Faculty of Dentistry?
Competent dentists are vital to the betterment of health care, and contributions will enable the faculty to provide the best facilities, teachers, and research support for students. In turn, members of our community will live more comfortable and rewarding lives.

For me, orthodontics is a wonderful profession that I have practised for more than 25 years, and I wanted to give back to the profession and to society. I appreciate and cherish this opportunity to support the faculty and hope others will do likewise to support the education of dentists in Hong Kong.

On 10 June 2006, representatives of the HKU Faculty of Dentistry had a chance to personally thank two donors in grand style, at the Shatin Race Course.

HKU Vice-Chancellor Prof Lap-chee Tsui joined the faculty in expressing gratitude to Dr Patrick LS Chee and Mr Philip Yau for the major contributions they had made in the past year to fund dental education at HKU. One of the races of the day was named “Friends of the Faculty of Dentistry”, and Dr Chee was invited to present the race prize to the owner of the winning horse.

Reunion at the races
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Dental implant service takes root

Two HKU alumni, Mr Lawrence SP Fung and Mrs Alexandra LSW Fung, announced on 8 August 2006 that they have established the **Azalea (1972) Endowment Fund** to support HKU projects that will benefit the local community and help HKU achieve its Centenary Vision. The first project chosen to receive funding will be the Faculty of Dentistry’s dental implant service for elderly patients.

To create the Fund, Mr and Mrs Fung, both 1972 graduates from the Faculty of Social Sciences, donated 10% shares in the issued share capital of Hong Kong Economic Times Holdings Ltd, of which Mr Fung is the chairman. HKU will retain the shares for at least 15 years and will use the dividends (estimated to be at least HK$3 million per year) to back selected projects.

The first year’s dividends will allow the faculty to offer a free dental implant service for elderly patients when the faculty’s **Implant Dentistry and Research Centre** opens; teaching and research in implantology will also be supported. Dean Samaranayake thanked Mr and Mrs Fung for their generosity, explaining that the Fund aims to initially support 100 elderly edentulous [toothless] patients by the fitting of implant-supported dentures.

To mark the occasion, HKU Vice-Chancellor Prof Lap-chee Tsui invited Mr and Mrs Fung to plant azalea shrubs in the University Lodge’s garden. The blooms will symbolise the growth of the Fund, and indeed inspired the Fund’s name because they remind Mr and Mrs Fung of the “nerve-wrecking time of studying for examinations,” according to Mr Fung. “It will be nice if everyone could give back to their schools where they were educated, and benefit their home of Hong Kong,” he added.

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Funds to bone up on bone research

An alumnus from the HKU Faculty of Science has recently anonymously donated HK$800,000 to the HKU Faculty of Dentistry as a designated gift for bone research in the Discipline of Orthodontics.

The donor was inspired to make the donation after reading local newspaper coverage this summer about the research findings of Prof Bakr Rabie and Dr Ricky WK Wong, who are looking for bone graft alternatives. The alumnus, who read Science and Engineering and is now retired, wanted to contribute to the search for artificial bone graft materials, “in the hope that the results will benefit the HKU Faculty of Dentistry, The University of Hong Kong, and eventually society”.

Prof Rabie and Dr Wong have already discovered some candidate bone graft replacements that stimulate bone formation in animals, and they plan to conduct human clinical trials. The faculty is very grateful for the contribution, which will allow the continued success of the bone research programme in the Discipline of Orthodontics. What is more, thanks to the **Stanley Ho Alumni Challenge**, this gift will be matched dollar for dollar; it will also be matched by the Government Matching Scheme.

You can do some matchmaking too

*Expressions* urges readers who are HKU or faculty alumni or students to similarly take advantage of the **Stanley Ho Alumni Challenge** scheme to match one-time or recurrent donations made until October 2010.

Donors can choose to support the Dean’s Development Fund for Excellence or any faculty research group, discipline, or programme. *Every contribution makes a difference!*

To make a donation to the faculty, please download the form from the last issue of *Expressions* (2006 Issue 2, page 17, available on the News page of the faculty website <www.facdenthk.org>) or use the online form at <www.hku.hk/giving>.

*Thank you for your support!*

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Community investment

*Expressions* is pleased to announce that the Jetta Co Ltd has pledged a sum of HK$150,000 to the faculty to support its clinical research activities in the Discipline of Dental Public Health.

Dean Samaranayake, in thanking Mr Lewie Leung, Assistant Project Manager of Jetta Co Ltd, said the donation will be put to good use in boosting the faculty’s efforts to promote oral health within the Hong Kong community.

Jetta Co Ltd (website, <http://www.jetta.com.hk>) is an original equipment manufacturer and makes a wide range of innovative products and equipment.
Guide to oral hygiene

- Why is oral hygiene important?
- How should I keep my teeth and gums healthy?
- When should I see a dentist?

Why is oral hygiene important?

Microbes (mainly bacteria) that collect around teeth and gums become a thin sticky layer or ‘biofilm’ called plaque on the surface of teeth. These microbes convert sugars and starches from food and drink into acids, which—along with acidic food and drink—dissolve the surface of teeth.

Saliva offers some protection, but plaque and food debris need to be physically and regularly removed by a good oral hygiene routine. Poor oral hygiene and frequent acid attack due to snacking will cause tooth decay. In addition, plaque build-up at and below the gumline can lead to gum disease, which may lead to bone loss and eventually tooth loss.

Oral hygiene tips

- Brush teeth twice a day with a fluoride toothpaste, brushing plaque away from the gums (brushing should last a total of 3-4 minutes—about the length of a song on the radio)
- Floss between all teeth once a day
- Change your toothbrush regularly

Other tips for a healthy mouth

- Limit the frequency of snacking, especially of sugary and acidic food and drink
- Never dip babies’ dummies (pacifiers) in honey, fruit juice, or syrup; don’t leave a baby with a nursing bottle at night
- Have regular dental check-ups; dentists can fill in natural deep grooves on the biting surface of back teeth (fissure sealing) to reduce the chance of decay
- Chew sugarless gum to stimulate saliva flow
- Keep a healthy lifestyle: have enough rest, have a balanced and regular diet, exercise regularly, and do not smoke

When should I see a dentist?

Visits should be regular, at least yearly. Your dentist can detect early signs of tooth decay and gum disease, fix problems early, and give advice on how to prevent disease and maintain oral hygiene. You need to see a dentist if you have these:
- Toothache or sensitivity to sweet, hot, or cold food and/or drink
- Visible holes or discoloured spots on teeth
- Receding or bleeding gums, especially when brushing and flossing
- Bad breath (halitosis), which can be due to decaying teeth or periodontitis
- Other problems, such as a mouth injury, a painful jaw, partially emerged (impacted) wisdom teeth, a persistent dry mouth, loose teeth, or teeth grinding (bruxism).

What does it mean?

Some commonly used dental terms:

- Calculus: Hardened plaque (=tartar), which needs professional removal
- Caries: Tooth decay due to acid attack and entry of microbes into the tooth, leading to carious lesions (=cavities)
- Abscess: Collection of pus in or around a tooth due to infection
- Gingivitis: Inflammation of gum due to plaque build-up
- Scaling: Professional removal of calculus, plaque, and stain (scaling of the root surface= root planing)
- Restoration: Filling of a cavity with metal or metal alloy (eg, amalgam), or tooth-coloured porcelain or plastic-based material
- Endodontic or root canal treatment: Treatment for infection of the contents and roots of a tooth
- Extraction: Removal of a tooth that cannot be saved
- Periodontitis: Loss of ligament attachment and bone, and eventually the tooth, due to inflammation of the tissues around the tooth


Written by Trevor Lane, DPhil; edited by Edward Lo, PhD, FHKAM (Dent Surg) and Esmonde Corbet, FDSRCS, FHKAM (Dent Surg). This Patient Page is for general informational use and is not a substitute for diagnosis; for specific advice, please consult a dentist.
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