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December 1 - 3, 2011  
January 19 - 21, 2012  
February 23 - 25, 2012

For more details, visit [www.dentistry.ubc.ca/cde](http://www.dentistry.ubc.ca/cde)

FALL 2011 - SPRING 2012

EVENTS FOR STUDENTS AND ALUMNI

4th Annual Battle of the Bands:  
Faculty/Alumni vs. Students  
January 13, 2012 (Friday)

MORE EVENTS FOR ALUMNI

Alumni Wine Reception  
TODS Meeting, Kelowna  
October 21, 2011 (Friday)

Annual Alumni Reception  
Pacific Dental Conference 2012  
March 9, 2012 (Friday)

More information about these events can be found on page 37 in this issue of *Impressions* or at [www.dentistry.ubc.ca/alumni](http://www.dentistry.ubc.ca/alumni)



IMPRESSIONS

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UBC DENTISTRY



FALL 11

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Advancing Oral Health Through Outstanding Education, Research and Community Service



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## Dean's Message



*Dear Colleagues,  
Welcome to the autumn 2011 edition of UBC Dentistry's Impressions.*

Beginning a new academic year is always exciting. Our student body keeps growing: the first-year DMD class has 48 students compared to the average of 41 over the last 10 years, the dental hygiene program continues to expand and the new clinical specialty graduate programs are adding more and more students as the programs mature.

This growth in the number of students has prompted several renovation projects in the John B. Macdonald (JBM) Building. While these renovations do impose some burdens, it is very clear to everyone that the new spaces directly enhance the environment for learning. The newly renovated plaster lab—made possible by a generous donation from Aurum Ceramic Group of Companies—has just opened to provide all students with an outstanding space for performing laboratory procedures. Other major projects scheduled for JBM include: the remaining operatories in the old clinic will be removed and new clinic space built for the clinical specialty graduate programs; the existing graduate student commons will be redeveloped into a dynamic space for all our grad students; and the Sutherland clinic, next to the old Specialty Clinic, will be transformed into a conference

space, providing Continuing Dental Education with permanent space for study clubs to meet, practise and learn.

The Faculty of Dentistry has been fortunate in faculty recruitment activities—12 full-time faculty members have joined us in the last year and a half. These new faculty members will add immensely to advancement in our research, teaching and service missions.

The major articles in this issue of *Impressions* focus on some significant accomplishments in research and community service. Researchers Drs. Alan Lowe and Fernanda Almeida have become internationally recognized for their achievements in dental sleep medicine. The incidence of sleep disordered breathing is growing, and UBC Dentistry has a leading role in recognizing and treating these conditions. Sleep disordered breathing may be associated with other medical problems: sleep apnea, for instance, is associated with cardiovascular disease, hypertension and stroke to name a few. On another research front, Dr. Dieter Brömme, a Tier I Canada Research Chair, focuses on the destructive impact of proteases on tissues. Inhibiting the function of these enzymes will lead to new therapeutic approaches for several health and dental conditions.

Links between the Faculty and the community also continue to grow. The role of part-time clinical faculty and community clinic volunteers is critically important, and this issue highlights the contributions some of these very committed individuals are making. This issue also introduces opportunities for others who would like to become involved in community projects.

We are pleased to present a few of the achievements we have realized as we carry out our Strategic Plan. I hope you share my excitement about the current accomplishments in the Faculty of Dentistry. We have outstanding students, staff and faculty members, who are confidently leading our profession into the future.

All the best,

Charles Shuler, DMD, PhD  
Dean and Professor, Faculty of Dentistry

PHOTO BY MARTIN DEE | COVER PHOTO BY RICHARD SIMONSEN

# NEWS

## UBC Dentistry 'Adopts' an Elementary School

UBC Dentistry is addressing the oral health needs of some of the most vulnerable residents of East Vancouver. Florence Nightingale Elementary School, identified as one of 16 at-risk inner-city elementary schools, has been "adopted" by UBC Dentistry as the pilot location for its Adopt a School Program.

Through the program, a one-chair dental clinic has been installed in the school—a school with an astonishingly varied socio-economic and cultural footprint. This is a sustainable response to treat and educate school-age children most at risk for oral health neglect. Most children at Florence Nightingale do not have the opportunity to receive dental examinations and treatments. More than one in five children at the school have suspected tooth decay and oral disease.

According to Jenny Chin Petersen, the school principal, dental care has historically been the missing element in the drive to improve the overall wellness of students. However, this elementary school, with approximately 250 children and an additional 250 students in the connecting annex, is now home to a unique educational and service learning module supported by Dentistry's DMD students, general practice residents and alumni volunteers.

"Many children at the school are suffering serious oral dental pain," notes Dr. Christopher Zed, associate dean, Strategic and External Affairs. "Dentistry residents, students and faculty are very familiar with treating underserved communities and take this social responsibility very seriously."

The Adopt a School Program creates unique opportunities for children and their families to learn from UBC students about the techniques and benefits of oral care. Reduced sleep deprivation and absenteeism, as well as improved classroom attentiveness, are a few of the immediate benefits anticipated as a result of eliminating oral pain.



Vancouver School Board shared renovation costs for the clinic and waived all rental charges. There is an additional proposal by UBC Dentistry to use BC Healthy Kids Program basic dental services coverage to support the overhead costs. However, there remain significant program costs associated with supplies, equipment and maintenance. The Adopt a School Program requires an annual funding commitment of approximately \$30,000 to ensure the clinic is fully operational on a yearly basis.

If you are interested in supporting wellness and health education for school-age children and their families through this program at Florence Nightingale Elementary School, contact Nik Williams-Walshe, at 604-822-6808 or [nww@dentistry.ubc.ca](mailto:nww@dentistry.ubc.ca)

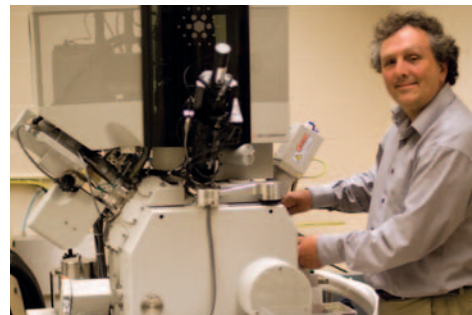




## Bioimaging Equipment: It's Here!



Dr. Edward Putnins (2nd L) and Nancy Ford (L) talk with construction crew in the space slated for the Centre for High-Throughput Phenogenomics. This more central location on campus, in the new Pharmaceutical Sciences building, will enhance research and cross-discipline collaborations in the areas of hard tissue development and degradation, and will support the development of novel treatment approaches utilizing new drug therapies.



Clive Roberts demonstrates the specimen drawer of the Helios 650, a dual beam scanning electron microscope. Repeated cycles of imaging and ion-beam cutting are used to reconstruct a 3D structure on the cellular and subcellular scale. His first application of Helios 650 was to reconstruct the microstructure of dentin in various areas of the tooth, and to investigate 3D contacts between bone cells, interactions that are essential for maintaining healthy bone structure.

Ask Dr. Edward Putnins, professor and associate dean of Research, Graduate and Postgraduate Studies, what \$3.5 million can buy, and he will tell you precisely: a MALDI LTQ Orbitrap tandem mass spectrometer, an optical projection tomography (OPT) scanner, a Leica white light confocal microscope, and a Helios 650 dual beam scanning electron microscope. This equipment, the bulk of imaging infrastructure for the Centre for High-Throughput Phenogenomics, has begun arriving at Dentistry.

Putnins and other co-applicants at UBC were awarded a multi-million dollar government grant from the Canada Foundation for Innovation and the British Columbia Knowledge Development Fund to expand Dentistry's bioimaging facility and upgrade its vastly outdated ultramicrotomy, transmission and scanning electron microscopy systems. (See *Impressions*, fall 2009.)

The inconvenience of stepping around large wood packing crates containing the sensitive, precision-based equipment from Europe, the United Kingdom and the United States has been minor compared to the huge boost this equipment gives to dentistry, medicine, science and engineering researchers at UBC and across Canada and the western United States. "The Helios 650 uses EDAX [energy-dispersive X-ray spectroscopy] secondary electron detector systems, which allow us to analyze the elemental composition of small areas of the sample. For example, we can look at the mineral composition in a particular part of a tooth or bone sample, and predict the elemental properties of that part of the structure," explains Putnins of the scanning electron microscope built in the Czech Republic. "There is no other system like this in Canada or on the west coast of the United States." A core component of the bioimaging facility, the Helios 650 will operate 24 hours per day, seven days per week. This will enable faster research results, accelerating the rate

at which disease regulators can be examined and potential therapies evaluated.

Currently installed in a temporary location in the John B. Macdonald Building, the equipment will be moved to its final home in 2012. The new bioimaging facility—an environment purpose-built to accommodate the scientific functions and supported by high-volume data storage and analysis—is taking shape in the UBC Faculty of Pharmaceutical Sciences' Centre for Drug Research and Development building now under construction. (See *Impressions*, fall 2010.)

Behind the scenes, yet another aspect of the facility is being formulated. Nancy Ford, an assistant professor newly hired as the centre's director to oversee the development of novel 3D analysis methodologies, and Clive Roberts, associate professor, are busy developing policies, procedures and a cost-recovery business model. The centre's website, phenogenomics.dentistry.ubc.ca, will feature full descriptions of the equipment to help researchers with their imaging requirements, an online booking calendar for the equipment, and standard operating procedures for specimen preparation.

Putnins is proud of the awarded grant and of the centre's cross-disciplinary approach and synergistic model. He anticipates not only UBC researchers, but those from other universities, institutions and private companies will reap the rewards of working with an advanced bioimaging facility in Canada. "We believe the greatest scientific advantages will occur through collaborations between scientists that cross traditional research boundaries but exhibit complementary expertise."

PHOTOS BY TERRY WINTONYK

## A New Spin on Endodontics Education

How do you make an already dynamic, interactive DVD-ROM on the subject of endodontics even better? Ask Dr. Markus Haapasalo, editor-in-chief of the latest incarnation of the multimedia program on the topic: *Visual Endodontics 2012*.

Building on the success of *Visual Endodontics Curriculum*, a DVD-ROM released in 2006, Haapasalo and colleagues updated the subject in 2011 with 3,000 images, 100 videos and hundreds of pages of hyperlinked text, and they present the material in a compelling style for both specialists and general practitioners. "It now covers the whole discipline," Haapasalo begins, "including diagnostics, treatments, instruments, materials, etc. In this way, it presents more ramifications, so it's more than a topic-specific lecture." Key learning points are linked to relevant biomedical literature citations on PubMed, an online database developed by the US National Library of Medicine.

Continuing education (CE) credits can be earned through UBC Dentistry's Division

of Continuing Dental Education. "We had CE in mind and built in the required components like asking questions of an expert and providing a channel for feedback to the user," Haapasalo says, also noting the better performance and snappier interface, both driven by new software.

Haapasalo, a professor and chair of the Division of Endodontics, asserts that *Visual Endodontics 2012* is a powerful learning and teaching tool with potential to replace

short-lifespan textbooks and time-consuming lectures, which are both expensive.

Backed by hundreds of endodontic content providers and an international editing and advisory board, *Visual Endodontics 2012* has received positive feedback from the Centre for Teaching, Learning and Technology at UBC and from the BC Endodontic Society.

For more information, visit [www.visualendodontics.net](http://www.visualendodontics.net)

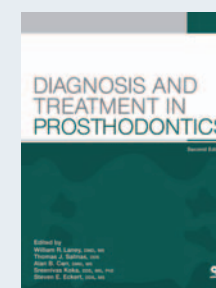


A screen capture from *Visual Endodontics 2012*.

## On the Cover—Publications by UBC Dentistry Faculty



Fernanda Almeida, assistant professor, Department of Oral Health Sciences, was guest editor for *Sleep and Breathing* (May 2011), an international journal of the science and practice of sleep medicine. It is the official journal of the American Academy of Dental Sleep Medicine and other dental sleep medicine organizations in Europe and Asia. Dr. Almeida, who regularly contributes as associate editor, notes in her guest editorial, "Dental Sleep Medicine in Education, Practice and Research," that this special issue features a significant number of excellent articles in the field of dental sleep medicine. For the first time, an entire edition of *Sleep and Breathing* is dedicated to focusing on dentistry in sleep medicine. View the journal at [www.springerlink.com/content/1520-9512/15/2](http://www.springerlink.com/content/1520-9512/15/2)



To provide succinct and practical information about oral and maxillofacial radiology, Quintessence Publishing—an international publisher of professional and student dental and medical books, journals and multimedia products—turned to Dr. David MacDonald, a recognized expert in the field. The associate professor and chair of the Division of Oral & Maxillofacial Radiology provided a chapter on the subject for their second edition of *Diagnosis and Treatment in Prosthodontics*.



## NSERC Funding Awarded for Tooth and Jaw Development



*Reptiles like pythons and leopard geckos are ideal study subjects.*

A research program providing fundamental insights into craniofacial development and evolution got a bit brighter with funding from the Natural Sciences and Engineering Research Council of Canada (NSERC).

Dr. Joy Richman, a pediatric dentist and development biologist, was awarded an NSERC Discovery Grant of over \$312,000 over five years to continue her studies of reptilian tooth and jaw development. Building on her previous molecular studies of snake genes to increase the understanding of how human jaws and teeth evolve, the first aim of the awarded research program is to elucidate the mechanisms of tooth development in polyphyodont animals (animals with successive sets of teeth). The second aim is to understand the mechanisms for the variation in skeletal morphology in reptiles.

"In the next five years, we will be focusing on the growth-factor signalling that regulates tooth replacement and the participation of epithelial stem cells in this process," she says.

*"In the skeletogenesis arm of the grant, we will focus on palate and temporal bone development."*

Her other area of expertise, using chicken embryos to shed light on facial abnormalities, is also involved: "Our approaches will be to apply the molecular and functional techniques we use in our chicken work [see Impressions, fall 2010] to the study of reptiles."

Reptiles like pythons and leopard geckos are ideal study subjects, because as egg-laying animals, tooth development can be easily studied in the embryos. The bigger picture of Richman's investigations using the reptilian animal model is to ascertain how the second generation of teeth (permanent teeth) forms in humans. This work will lead to a better understanding of how human tooth number is controlled and could translate into new methods of regenerating lost teeth.

## CIHR Doctoral Research Award to Richman Lab Student

Sara Hosseini-Farahabadi, a PhD student in the Cell and Developmental Biology Program under the supervision of Dr. Joy Richman, won the Frederick Banting and Charles Best Canada Graduate Scholarship from the Canadian Institutes of Health Research for her work, "Discovery of WNT5A Functions During Embryonic Skeletal Development in the Face." The scholarship provides a \$30,000 per year trainee stipend and a \$5,000 per year research allowance over three years. All candidates were expected to have an exceptionally high potential for future research achievement and productivity. There were over 900 applications in the competition, and Sara was ranked in the top 10 percent of the biomedical category.

Read past editions of *Impressions* at [www.dentistry.ubc.ca/impressions](http://www.dentistry.ubc.ca/impressions)

## Dentistry Professor Wins Prestigious Dental Sleep Medicine Award



The 2011 recipient of the Pierre Robin Academic Award, Dr. Fernanda Almeida, with UBC Dentistry professor Dr. Alan Lowe, the first recipient of the award in 1999.

Dr. Fernanda Almeida, assistant professor in the Department of Oral Health Sciences, has won the 2011 Pierre Robin Academic Award from the American Academy of Dental Sleep Medicine (AADSM) for her outstanding

work in the field. The award—presented in Minneapolis, Minnesota, on June 10, 2011, at the AADSM 20th Anniversary Meeting—honours individuals who have exhibited exceptional initiative and progress in the areas of education and academic research, with original contributions to the field of dental sleep medicine.

Almeida, who teaches oral and maxillofacial radiology and dental sleep medicine, received her master's degree from the Federal University of Sao Paulo and her PhD at the University of British Columbia, both in the field of dental sleep medicine.

Almeida leads the area of dental sleep medicine at UBC with Dentistry professor and colleague Dr. Alan Lowe, who was

the first recipient of the award in 1999. She has published more than 35 peer-reviewed papers and four book chapters. Her research is focused on dental sleep medicine, involving oral appliance side effects on dentition, temporomandibular joint disorder, compliance, titration modalities and treatment outcomes. She also researches upper airway imaging, and pediatric and geriatric sleep disorder breathing. To read more about Almeida's award and her biography, visit [www.dentistry.ubc.ca/go/almeida](http://www.dentistry.ubc.ca/go/almeida).

For more information on Almeida and Lowe's work, read "And to All a Good Night! UBC Leaders in Dental Sleep Medicine" on page 12 in this issue of *Impressions*.

## Techie or Trekkie? It's All Good for Learning



PHOTO COURTESY OF PROTEC DENTAL LABORATORIES LTD.

Dr. Jim Richardson, clinical assistant professor, is an avid learner, especially when the subject is technology. Richardson graduated this past spring with his Master of Educational Technology (MET) degree from the UBC Faculty of Education.

Director of Integrated Clinical Care at UBC's third- and fourth-year teaching clinic, Richardson is a self-proclaimed "tech-nerd" and sees technology playing an increasing role in clinical learning. He is currently researching the use of haptic devices (immersive tactile feedback technology) in clinical simulation.

One device looks like a dental handpiece and operates like a joystick that provides high-quality touch feedback as a student works on a virtual jaw or tooth. It may someday replace the traditional mannequin head and plastic teeth typodont models. Richardson explains: "Unlike the plastic typodont tooth, the textural haptic feedback accurately replicates the differing density of enamel, dentin, pulp and tooth decay. In addition, in contrast to the uniformity of the typodont, the virtual jaw is modelled to represent many different tooth morphologies and arrangements and can be rapidly 'replaced' with the click of a button. This gives students more opportunity for practising their hand skills, rather than wasting time unscrewing and replacing five-dollar plastic teeth." Richardson also notes that the device can record the preparation process, allowing analysis and error correction. "The instructor can now

not only identify what is wrong, but also why and when it went wrong."

As skills advance, case scenarios can be built around the virtual patient to help students integrate the psychomotor skills into clinical decisions, making the transition to patient care seamless. "It's like learning dentistry on the 'holodeck,'" says Richardson of haptic devices in clinical simulation.

Faculty who teach operative dentistry are keen to try this new technology. UBC Dentistry is applying for research grants and partnering with UBC Medicine's simulation-based educational research efforts. Financing is the biggest barrier.

Richardson's MET studies exposed him to the pitfalls of technological determinism: "Just because it is new and shiny doesn't mean it's better. Improved learning outcomes are key; typically, educational technology that works is based on sound learning theory and cognitive psychology. What the technology can do is make the surgical component of care more predictable." With the digital revolution entering its fourth decade, UBC's dental education program is poised to "boldly go" beyond the traditional. Beam me up, Scotty!



# New Appointments: Full-Time Faculty



Dr. Nancy L. Ford

Nancy L. Ford, PhD, has joined the Department of Oral Biological and Medical Sciences as assistant professor, and is director of the Centre for High-Throughput Phenogenomics—UBC Dentistry’s bioimaging facility. Dr. Ford received her doctoral degree in Medical Biophysics from the Schulich School of Medicine & Dentistry at the University of Western Ontario in 2005. Her thesis, “Optimization of Micro-Computed Tomography Techniques for In Vivo Small-Animal Imaging,” was the apex of a solid background in the field. In 1997 she received her Bachelor of Science (Honours) in Chemical Physics from the University of Waterloo, then worked as a research assistant at Sunnybrook and Women’s College Health Sciences Centre, Toronto, from 1997 to 2000. She was a postdoctoral fellow at the Imaging Research Laboratories, Robarts Research Institute, University of Western Ontario, between 2005 and 2006, and assistant professor in the Department of Physics, Ryerson University, from 2006 to 2011. Ford is an expert in micro-computed tomography and in vivo small-animal imaging—specifically, physiologically gated imaging in free-breathing animals and quantitative image-based measurements of structure and function from 3D micro-CT images. Ford is a member of the editorial board of *Medical Physics*.



Dr. Kavita R. Mathu-Muju

Kavita R. Mathu-Muju, DMD, MPH, FRCD(C), has joined the Department of Oral Health Sciences, Division of Pediatric Dentistry, as assistant professor. Dr. Mathu-Muju is a 1993 graduate of the Faculty of Dentistry of the University of Manitoba. She matriculated in the pediatric dentistry residency program at the School of Dentistry of the University of North Carolina at Chapel Hill in 2003. Concurrent with her residency, she earned a Master of Public Health degree, completing both programs in 2006. Mathu-Muju is a Diplomate of the American Board of Pediatric Dentistry and a Fellow of the Royal College of Dentists of Canada. She was a general dentist with the First Nations and Inuit Health Branch of Health Canada and volunteered with Kindness in Action, a non-profit organization providing dental treatment to underserved, indigenous populations in Central and South America. She is passionate about caring for children and advocating to improve their access to oral health care. From 2006 to 2011, Mathu-Muju was assistant professor at the College of Dentistry, University of Kentucky, where she led the establishment of a master’s degree program in pediatric dentistry. Her publications appear in a variety of peer-reviewed journals, and she serves as peer reviewer and editorial board member for *Pediatric Dentistry* and the *Journal for Dentistry for Children*.

PHOTOS BY MARTIN DEE

## UBC Dentistry Research Day 2012 BIOFILM DISEASE DYNAMICS: FROM UNDERSTANDING TO ERADICATION

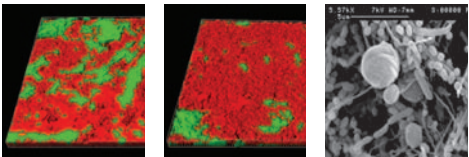
Tuesday, January 24, 2012  
UBC Student Union Building Ballroom

Biofilm, often referred to as “plaque,” is an aggregate of microorganisms that preferentially grow in slime-enclosed communities and have an inherent resistance to disinfectives, antibiotics and host defences. These biofilm properties are the basis for dental diseases such as caries, root canal infections and periodontal diseases.

Research Day 2012 will highlight the exciting and progressive work of UBC Dentistry’s faculty in the areas of biofilm dynamics, control, eradication, significance in treatment failures, and community strategies to manage dental caries.

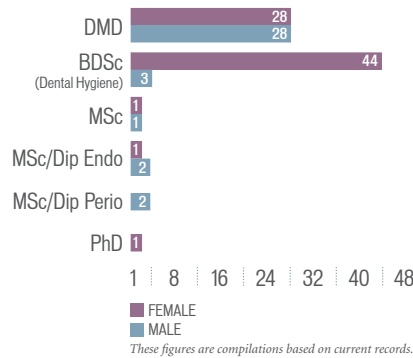
The Faculty of Dentistry is honoured that the keynote address will be delivered by Dr. Bill Costerton from the Center for Genomic Sciences, Pittsburgh, Pennsylvania. Dr. Costerton is widely credited with founding the field of Biofilm Microbiology and has over 650 publications on this important topic.

Keep up-to-date at [www.dentistry.ubc.ca/researchday](http://www.dentistry.ubc.ca/researchday)



## Graduation Class 2011

May 31, 2011, marked the 43rd class of graduates from UBC Dentistry. This year, 111 people graduated across all programs. Here is a look at the numbers:



➡ Congratulations to all graduates in the Faculty of Dentistry. Find out who they are at [www.dentistry.ubc.ca/grads](http://www.dentistry.ubc.ca/grads)

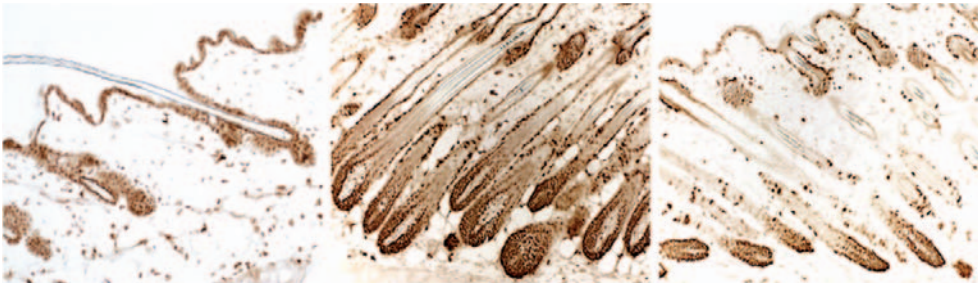
# CIHR Funds UBC Research Into Hair Follicle Stem Cells to Improve Steroid-Impaired Wound Healing

More than 30-million patients in North America receive steroid drug treatment for a broad range of general systemic conditions and skin inflammation. While therapeutic benefits are definitely positive, side effects are common—and of great concern to patients.

Long-term steroid drug treatment has significant side effects, causing damage in several body tissues, including the skin where tissue can atrophy. Impaired tissue repair, or poor wound healing, is one serious complication of steroid drug treatment, or glucocorticoid therapy. Glucocorticoids—a group of steroids naturally occurring in the body and used for anti-inflammatory treatment—affect almost every phase of wound healing due to their inhibitory effects on gene expression in various cells involved in healing. For patients who may encounter accidental or surgical trauma, this effect of glucocorticoids is of paramount concern.

Drs. Hannu Larjava and Lari Häkkinen from the Faculty of Dentistry, and Dr. Kelvin McElwee from the Department of Dermatology and Skin Science, UBC Faculty of Medicine, are looking at hair follicle stem cells and the role of an integrin in healing steroid-impaired wounds. Their research, titled “Regulation of Hair Cycle and Wound Healing by  $\alpha\beta6$  Integrin,” has attracted five years of funding—just over \$564,000—from the Canadian Institutes of Health Research.

Larjava explains the model: “Transforming growth factor beta 1 (TGF- $\beta$ 1), which is a



Hair follicles in mouse skin shown in hair cycle stages: resting (L), growing (C) and regressing.

naturally occurring molecule that regulates skin inflammation and tissue maintenance, strongly inhibits hair follicle stem cell growth and has been directly implicated as a significant factor in hair growth regulation.” TGF- $\beta$ 1 is produced in the body as an inactive molecule and needs to be activated to function. One of the main activators of TGF- $\beta$ 1 is an integrin that is expressed on the epithelial cell surface.

“We have recently demonstrated that this integrin is localized in hair follicle stem cells, where it could keep these cells inactive by way of TGF- $\beta$ 1 activation.” The UBC researchers have also demonstrated that mice engineered to lack this integrin ( $\beta6^{-/-}$ ) have accelerated hair growth and delayed hair regression. Of most consequence, Larjava notes, is that steroid-impaired wounds heal significantly better in  $\beta6^{-/-}$  mice than in normal mice.


When people receive corticosteroids, these drugs inhibit stem cells, which delays the


“re-epithelialization” of wounds. Working under the hypothesis that this integrin naturally suppresses stem cell proliferation in hair follicles, Larjava anticipates that using inhibitors of this integrin could potentially reduce stem cell suppression. This would provide a useful therapeutic tool to improve outcomes of steroid-impaired wound healing.



Faculty of Dentistry External Awards and Recognition in 2010 - 2011

RECIPIENT	AWARD/RECOGNITION
Dr. Fernanda Almeida, Assistant Professor	Pierre Robin Academic Award, American Academy of Dental Sleep Medicine Diplomate, American Board of Dental Sleep Medicine
Dr. Mario Brondani, Assistant Professor	Awarded to attend the International Association of Dental Research General Session, March 2011, San Diego, California, Canadian Institutes of Health Research – Institute of Population and Public Health
Dr. Maria Isabel (Marissa) Garcia Fulle de Owen, Clinical Assistant Professor	Inducted into the Royal College of Dentists of Canada as a Fellow, September 2011
Dr. Michael I. MacEntee, Professor, Prosthodontics and Dental Geriatrics; ELDERS Research Group	Distinguished Service Award, College of Dental Surgeons of British Columbia
Dr. Benjamin Pliska, Assistant Professor	2011 Robert E. Binder Teaching Fellowship Award, American Association of Orthodontists Foundation
Dr. Lawrence Rossoff, Clinical Assistant Professor	Inducted into the American College of Dentists as a Fellow, October 2010
Dr. Michele Williams, Clinical Professor; Founding Member, BC Oral Cancer Prevention Program	Co-winner, Oral Health Promotion Award to BC Oral Cancer Prevention Program, Canadian Dental Association
Ajit Auluck, PhD candidate	Fellowship, Psychosocial Oncology Research Program, Canadian Institutes of Health Research – Institute of Cancer Research and Institute of Health Services and Policy Research  Awarded to attend the 2011 Canadian Association of Psychosocial Oncology (CAPO) Conference, May 2011, Toronto, Ontario, Psychosocial Oncology Research Program  Best Student Poster Research Presentation Award for “It’s in My Culture’: Betel Quid and Smokeless Tobacco Use Among South Asian Men in British Columbia” (Auluck A, Hislop G, Zhang L, Bottorff J, Rosin M), Canadian Association of Psychosocial Oncology
Sara Hosseini-Farahabadi, PhD candidate, Richman Lab	Frederick Banting and Charles Best Canada Graduate Scholarship for her work, “Discovery of WNT5A Functions During Embryonic Skeletal Development in the Face,” Canadian Institutes of Health Research
Bruce Wallace, PhD candidate	Awarded to attend the International Association of Dental Research General Session, March 2011, San Diego, California, Canadian Institutes of Health Research – Institute of Musculoskeletal Health and Arthritis
Major Les Campbell (retired), MSc/Dip Endo candidate	Awarded the Thompson Trophy for duty in Haiti performing forensic odontology on Canadian earthquake victims, Canadian Armed Forces
Wesley Mah, MSc candidate, Cell and Developmental Biology; Laboratory of Periodontal Biology, University of British Columbia	Skin Research Training Centre Scholar Award, Canadian Institutes of Health Research
Mark Parhar, DMD 1997, MSc/Dip Endo candidate	Merit Award, British Columbia Dental Association
Darlene Tam, BSc (DH) 2008, MSc candidate	First Place, poster award, Translational/Clinical Research Category, for “Screening Reduces Time Delay to Diagnosis of High-Risk Oral Lesions” (Tam D, Biggar H, Zhang L, Rosin MP, Poh CF), British Columbia Cancer Agency
Dr. Isaac Timothy Tam, MSc/Dip Ortho candidate	VDDS Director Recognition of Service Award 2009 – 2011, VDDS Midwinter Clinic Chair 2010 – 2011, Vancouver and District Dental Society
David Wen-Chi Chen, DMD 2014 candidate	National Yang-Ming University Summer Exchange Program Scholarship, National Yang-Ming University, Taipei, Taiwan
Leila Mohazab, DMD 2014 and MSc candidate	Second Place, Junior Category, 2010 - 2011 CADR-IMHA Student Research Awards, Canadian Association for Dental Research and Canadian Institutes of Health Research – Institute of Musculoskeletal Health and Arthritis

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New Associate Deans

*Three new administrative appointees—Dr. Leandra Best as associate dean of academic affairs, Dr. David Sweet OC as associate dean of students, and Dr. Andrea Esteves as associate dean of clinical affairs—greeted the new academic year.*

While the associate dean of clinical affairs position has been vacant since the departure of Dr. M.A.J. (Lex) MacNeil in 2009, academic and student affairs has been under the leadership of Dr. Joanne Walton since 2001. Walton leaves her role to two associate deans who, respectively, will oversee the academic and personal life issues related to students’ education.



Dr. Leandra Best

W. Leandra Best, DMD, clinical associate professor, joined the Faculty of Dentistry in 1999 as a part-time instructor in fixed prosthodontics and quickly became involved in many components of the dental curriculum. As DMD coordinator for years one and two, she worked closely with the Faculty of Medicine on the delivery of our joint problem-based learning (PBL) pedagogy. She co-authored numerous PBL cases and developed Dentistry’s PBL Tutor Training Workshop and the PBL Orientation for students. Best, who received a 2004 Dentistry Teaching Award, a 2006 Killam University Excellence in Teaching Award and was the 2007 3M - ESPE ACFD National Teaching Award winner, is involved in UBC-wide faculty development workshops at the Centre for Teaching, Learning and Technology, the Faculty of Medicine and the UBC Campus PBL Network. She has extensive knowledge of the DMD curriculum, having taught in all four years and through numerous collaborative curriculum projects with faculty. Best serves as chair of the DMD Curriculum, Teaching and Effectiveness Subcommittee and has a keen interest in dental education research.



Dr. David Sweet OC

David Sweet OC, DMD, PhD, DABFO, FICD, FACD, professor, is also director of the Bureau of Legal Dentistry (BOLD) lab. He is a 1978 alumnus of UBC and a world-renowned scientist in forensic odontology. He was invested as an Officer of the Order of Canada in 2008 for enhancing Canada’s reputation in the science of victim identification and for his contributions as a teacher, researcher and consultant. Sweet has a long list of firsts in DNA recovery methods that have become global industry standards in forensic odontology, including techniques for disaster response. He is Canada’s odontology representative for the Interpol Standing Committee (Lyon, France) on disaster victim identification and a forensic adviser to the International Committee of the Red Cross (Geneva, Switzerland). Sweet has had an ongoing interest in UBC students, and this new role formalizes what he has advocated on their behalf.



Dr. Andrea Esteves

Andrea Esteves, DDS, MSc, clinical associate professor, arrived at UBC from Brazil in 1991 as a graduate student in Oral Biology. Under Dr. Michael MacEntee’s supervision, Esteves completed her MSc thesis, “Systemic Metabolism and Human Jaw Bone,” to provide histological information on the bone around implants. While still a graduate student, she taught in a number of DMD courses and modules, including prosthodontics. Esteves graduated in 1994, and in 1996 began at UBC as a clinical advisor and practitioner, soon taking on a larger role as clinic manager. Her leadership proved invaluable as a key member of the planning team for the Nobel Biocare Oral Health Centre, where she has been clinic director since 2009. Esteves has also been involved as a clinician supporting many of the Faculty’s geriatric dentistry research projects.




Leila Mohazab (C) receives her award from Dr. Jeff Dixon, CADR past-president, and Dr. Deborah Matthews, CADR president-elect.



Dr. Lawrence Rossoff (R), inducted into the American College of Dentists as a new Fellow, is seen with fellow BC-dentist inductees Drs. Donald Bays (L) and John Gloag at the ACD convocation in Orlando, Florida, October 2010.



The College of Dental Surgeons of British Columbia Distinguished Service Award recognizes outstanding and broad contributions to the dental profession in BC and to CDSBC over time. It was presented on March 17, 2011, to Dr. Michael MacEntee, Professor of Prosthodontics and Dental Geriatrics, as well as alumni Susan Chow DMD 1972 and Ash Varma DMD 1983. Back row (L to R): Drs. Ash Varma and Mel Sawyer, Mr. Victor Bowman, Dr. Michael MacEntee. Front row (L to R): Drs. Bob McDougall and Susan Chow, Ms. Heather MacKay (CDSBC registrar), Ms. Cathy Larson, Dr. Bob Coles (CDSBC president). Awards of Merit were presented to Dr. Bob McDougall and past UBC faculty member Dr. Mel Sawyer (now an associate dean at the University of Manitoba).

 Keep up-to-date on all awards and achievements—including the annual Dean’s Night, Graduation and Teaching awards—at [www.dentistry.ubc.ca/awards](http://www.dentistry.ubc.ca/awards)



# AND TO ALL A GOOD NIGHT!

## UBC LEADERS IN DENTAL SLEEP MEDICINE

BY MARI-LOU ROWLEY

*Sleep disordered breathing has become a growing health problem that affects the lives and well-being of sufferers and partners alike. Drs. Alan Lowe and Fernanda Almeida are working at the forefront of dental sleep medicine to help patients—and bed partners—get a better night's sleep, one deep breath at a time.*





We have all heard of, or experienced, the partner whose snores could rouse the dead. And until recently, the silent bed partner was expected to grin and bear it, or move to the couch. But with the advent of sleep medicine in the 1980s, it was discovered that snoring could be the sign of a much more serious and potentially fatal problem, obstructive sleep apnea (OSA). Dr. Alan Lowe, Dentistry professor and chair, Division of Orthodontics in the Department of Oral Health Sciences, has been a pioneer of dental sleep medicine since its inception. Lowe and Dentistry assistant professor Dr. Fernanda Almeida lead the Sleep Apnea Dental Clinic and are part of UBC’s cross-faculty sleep research team.

*“Snoring is so common that it has often been thought to be normal, particularly in men,” says Lowe. “But the more we researched it, the more we understood the prevalence, and that it is higher in women than we thought.”*

In fact, sleep medicine is the fastest growing area of medicine today because of the large percentage of the population it affects. Data suggests that up to 60 percent of Canadian males 50 years old and up snore, as do roughly 30 percent of females. While a much smaller percentage have sleep apnea, sleep remains disturbed, and sleep deprivation alone is a major health and safety concern. “The disease was only identified in the 1970s, so it is still very recent in the history of medicine,” notes Almeida. “With the increase in obesity there is a huge increase in sleep apnea, so the percentages are increasing dramatically.”

### Snoring Versus Sleep Apnea—A Deadly Difference

Although snoring is often considered mainly a social nuisance, it may be an indication of OSA, a chronic, life-threatening condition associated with cardiovascular disease, hypertension and stroke. “Snoring is to sleep apnea what a cough is to lung cancer,” explains Lowe. “Not everyone who snores

has sleep apnea nor does everyone who coughs have lung cancer. But few people who have sleep apnea don’t snore, and very few people who have lung cancer don’t cough.”

Snoring is a result of the narrowing of the upper airway due to the relaxation of the tongue and throat. “It tends to be worse when you are lying on your back, because the tongue falls back and the jaw rotates down and back, decreasing airway size,” says Lowe. (Think of your grandfather napping in his recliner, mouth open, snoring away.)

“A person has to breathe the same amount of air in and out, in the same amount of time, through an already narrow airway,” Almeida explains. “If the airway is partially obstructed, it becomes even narrower and the air must pass through faster, which vibrates the uvula and soft pallet, causing snoring.”

In sleep apnea, the tongue and soft tissue of the throat relax to the point that not enough air reaches the lungs, causing hypoxia, or low blood-oxygen levels. Symptoms of sleep deprivation are daytime sleepiness and fatigue, problems with memory and cognitive function, and other physiological and mood changes.

“Obstructive sleep apnea is very complex, and the cardiovascular disease associations have not been completely understood,” says Almeida. “The origin of cardiovascular disease in OSA patients’ is likely multifactorial. Intermittent hypoxia and frequent arousals are some of these pathways.” Several such arousals, over the course of an hour, destroy the restorative function of sleep and may increase blood pressure and lead to cardiovascular problems such as atrial fibrillation.

Data dating back to 1988 show that after 10 years post-diagnosis for untreated patients with severe OSA (20 apnea events per hour or more), 39 percent had died by year nine. Recent data show similar results and also that there is a higher incidence of cardiovascular disease even in mild to moderate sleep apnea patients. Treatment of patients with mild to moderate OSA can reduce cardiovascular risk by 64 percent, independent of age.

### Treatment Options: CPAP and/or Oral Appliances

Lowe and Almeida work in collaboration with the UBC Hospital Sleep Disorder Program, which is one of the foremost sleep clinics in the country. Both emphasize that because OSA has serious health implications, it must be diagnosed by a family physician or sleep medicine specialist. Dentists can play a crucial role in OSA treatment. There are currently two treatment options for patients: continuous positive airway pressure (CPAP) and oral appliances.



CPAP involves a mask—most commonly a nasal mask attached to an apparatus that forces air into the lungs. Most oral appliances work by holding the jaw closed while moving the tongue and jaw forward to open the airway. Both CPAP and oral appliances have advantages and disadvantages, and there has been much debate over what device to prescribe and for what degree of apnea.

“There is evidence that up to 50 percent of CPAP machines may end up on the floor three months after treatment, so compliance

is not good,” says Lowe. Besides obvious discomfort, Lowe’s studies have found that CPAP can cause craniofacial changes, and others have documented skin abrasions, dry mouth, rhinitis, pressure intolerance and aerophagia (swallowing of air). “On the other hand, CPAP does increase blood oxygen levels better because it forces air into the entire airway with positive airway pressure.”

OSA is both a chronic and a progressive disease, so compliance is essential for treatment to be effective. Oral appliances are much more easily tolerated, are portable, adjustable and less costly; but, Lowe emphasizes, they need to be properly fitted by dentists, with regular follow-up.

### Oral Appliances Lead Dental Treatment of OSA

As a founder of the American Academy of Dental Sleep Medicine, and inventor of the Klearway™ oral appliance (see sidebar) for the treatment of OSA, Lowe is one of the world’s foremost experts in the field. Klearway set the benchmark for adjustable appliances when it was patented in 1995 and has become one of UBC’s long-term marketed inventions.

Today, Lowe and Almeida’s research is based on broader evaluations of oral appliances in general, and includes: the study of dentoskeletal, neuromuscular and soft tissue variables in patients with snoring and OSA; the study of tongue and jaw muscle activity, and the development of computerized models for analysis; and, testing oral appliance titration monitors for clinical applications in snoring and OSA. Titration refers to the adjustment of the appliance to ensure the airway is open.

“The biggest challenge with oral appliances is finding the correct jaw position where the airway is open, because it differs for every patient and there is no size or gender correlation,” says Lowe, noting again that it is crucial for dentists to be involved in fitting and monitoring these devices.

Sleep disordered breathing affects children as well. With industry funding, Almeida and

Lowe have recently undertaken a pediatric study to look at how oral appliances might benefit children with sleeping disorders.

### Research and Testing Tells the Tale

While not all of the medical community has embraced the use of oral appliances over CPAP, Lowe notes that enough research has been done to show their effectiveness. However, oral appliances are now recommended as the first line of therapy for mild to moderate apnea, and for people with severe OSA where traditional nasal CPAP has not been successful.

“Studies that compared CPAP to oral appliances, where patients used one treatment at a time over a three-month period, showed that subjective outcomes were not different at all,” says Almeida. “Patient improvement in quality of life, sleepiness and other symptoms remained the same with the appliance as with CPAP.”

In a clinical trial by Almeida and Lowe, successful CPAP users were given the option to use oral appliances as an alternative therapy, and about 50 percent moved completely to oral appliances after the study was finished.

One of the biggest criticisms of oral appliances is that they may affect the dentition and cause tooth movement. In another study, they showed that even a very low force from CPAP wear applied over a two-year period caused tooth movement and craniofacial changes.

*“We really don’t have a therapeutic option that doesn’t affect the dentition, which is another reason why dentists should be involved,” Lowe says.*

Another finding on the Klearway appliance in adults showed that it has a direct effect on blood pressure, reducing both systolic and diastolic blood pressure during sleep, and restoring the normal dip in blood pressure at night. While this is also an outcome of nasal CPAP therapy, this finding has huge implications for patients, dentistry and health care, particularly in cost savings.

Perhaps most interesting is the involvement that bed partners have in the CPAP versus oral appliance decision. While patient preference for one over the other favours oral appliances, 95 percent of bed partners prefer an oral appliance because it is less noisy and unattractive.

“Because of the improved oxygenation, the bottom line is that if patients are managing well on CPAP, they should be left alone,” says Lowe.

*continued next page*

### Klearway™ Reaps Dividends for UBC, Dentistry Research and Health Care

Since Klearway was first patented in Canada, the US and Europe in 1995, it has garnered not only numerous awards and recognition for inventor Dr. Alan Lowe, but sizeable sales and dividends that now fund dentistry research. To date, over 30,000 appliances have been sold around the world, and the royalty income helps to fund up to five researchers and support staff in Lowe’s lab. Lowe acknowledges the support of industry partners such as the Aurum Group and Space Maintainers Laboratories, who distribute the appliance across Canada.

“I have the wonderful job of deciding what research we want to do, and in a world of ever increasing funding and grant complexities, this is a real gift,” Lowe says.

Direct economic benefits of Klearway to Canada, including laboratory sales, royalties and dental office sales, are estimated at just over \$21 million since 1995. Indirect economic health benefits, such as reduced hospitalization and medical costs to society, are estimated at \$3.9 billion over the same period. Reduced motor vehicle collision costs are estimated to add another \$1.2 billion.



## Education and Partnerships Key to OSA Treatment

Both Almeida and Lowe stress the need for more education and training in dental sleep medicine and the use of oral appliances in Canada. UBC's dentistry program includes seminars on sleep medicine for undergraduates, and a number of graduate students are doing master's programs in the field. Almeida is currently in the process of setting up a two-year interdisciplinary graduate program to train dentists in dental sleep medicine.

Lowe notes that while the American Academy of Dental Sleep Medicine is celebrating its 20th anniversary this year and works closely with the US Food and Drug Administration on regulatory guidelines, Canada still doesn't have a university residency in sleep medicine or the same regulatory oversight of oral appliance protocols. Almeida is one of the authors of the soon-to-be-published Canadian guidelines on the prescription and supervision of oral appliances (see sidebar).

Lowe also cautions dentists who may be tempted to placate a complaining bed partner and self-treat, as it can be life-threatening. For example, 40 percent of sleep apnea patients have chronic obstructive pulmonary disease (COPD), and only a medical doctor is qualified to tell the difference between COPD and OSA.

UBC Faculty of Dentistry's Sleep Apnea Dental Clinic and the Faculty of Medicine's Vancouver Sleep Disorders Clinic have been bridging the chasm between the disciplines for the last three decades. "Our research teams are completely connected, and we have been doing joint grant work for many years. I have a cross appointment with the Department of Medicine, and they have cross appointments the other way as well," says Lowe.

*"Sleep medicine research at UBC is often used as an example of how other faculties can work together as interdisciplinary teams," says Lowe.*

"The other important thing for dentists to remember is that when they start treating a sleep apnea patient, they are part of a team of experts; they are not alone," says Almeida.

## UBC's Dentistry Clinical Research Centre

The new 3,200-square-foot Clinical Research Centre (CRC) will be dedicated to translating basic research—like that of Drs. Lowe, Almeida and other dentistry faculty—from bench to bedside. Located in the Faculty of Dentistry, John B. Macdonald Building, the CRC will provide the means to investigate clinical applications of basic research through studies on patients with defined health and disease profiles.

"Dentistry faculty have been doing clinical research and clinical trials for a long time, so this is an important new initiative," says Lowe.

The CRC's full-time staff will develop the protocols and ethical guidelines to conduct patient studies. The centre will be equipped with five dental operatories with multiple forms of radiology, and two surgical operatories for physical exams, outpatient medical procedures, oral and maxillofacial surgery, and general and pediatric oral health research.

"New areas of sleep research are focusing on larger randomized clinical trials, and now many studies are looking at people with chronic diseases, and need to follow patients over longer periods of time, so the timing of this facility is very important," says Almeida.

The centre's clients will benefit from collaborating with a scientific staff that has extensive experience in identifying the most effective strategies for conducting studies and developing optimal protocols to meet research needs. Most importantly, the centre will be designed to deliver optimum health care to research participants, while making them feel a part of the research team.

"Now, with electronic databases and networks, it is much easier to gather critical information for evaluating treatment," says Almeida, who notes that all indications are that the CRC will host an oral appliance network for the entire world.

*"The American Academy of Dental Sleep Medicine has allocated some funding to facilitate this process, so it is more than a dream—it is almost a reality."*

## Dental Sleep Medicine Guidelines (in a nutshell)

- Patients first should be assessed by their family physician. In BC, protocol suggests that the family physician organize an oximetry test, or blood oxygen sleep study.
- If the study is negative, there are no other symptoms of OSA or cardiovascular disease and the patient snores, then the family physician may refer the patient to the dentist directly.
- If the oximetry study is positive, the BC medical protocol is that the patient should see a sleep specialist. The patient may then be assessed in an overnight sleep study. The sleep specialist makes a decision regarding therapy, whether the patient requires a CPAP machine or oral appliance, and refers accordingly.
- After the recommended device is prescribed and is titrated, the patient must report back for a follow-up with the sleep specialist, who may then recommend a home study or another overnight study in the sleep clinic.
- Dentists should follow oral appliance patients on at least an annual basis.

## Dental Hygiene Students Enrich Lower Mainland ELSA Class

BY TERRY WINTONYK  
with files from Theresa Howell



Students from the UBC Dental Hygiene Degree Program might spend a lot of time in class learning their profession, but with community-based outreach initiatives, class time takes on a whole new character.

In March 2011, dental hygiene students visited English Language Services for Adults (ELSA) classes offered by the Immigrant Services Society of BC (ISSofBC). The UBC students enriched the student experience for those in the ELSA program with a lesson in dental hygiene.

This year marked the first time that dental hygiene students worked in New Westminster—at two sites—and in a Level 1 English-language classroom. In previous years, they have worked with Levels 1 to 5 in Vancouver-based classrooms.

Sayena Faraji, Maria Huellas, Ambreen Khan, Hyo Jeong Kim, Julie Kwan, Nagyung Lee, Ashley Lessard, Monica Park, Alysha Sunderji and Dana Yu were all second-year dental hygiene students at the time. They were divided into three teams, and each team taught three one-and-a-half-hour sessions over a span of six weeks.

Diana Lin, clinical assistant professor and program supervisor for UBC's Dental Hygiene Degree Program, summarizes the objectives of the initiative: to address the unmet oral health needs of vulnerable populations by delivering culturally appropriate oral health promotion/education and clinical services; to foster social responsibility and awareness; and to increase student exposure to various communities and interprofessional relationships.


Theresa Howell, an ELSA instructor, sat in on the classes.

*"I saw how committed and adaptable this program is to the needs of ISSofBC and the ELSA students. It was interesting to see how much energy and effort the students put into their lesson planning and delivery."*

Howell appreciates how programs like this benefit all involved, and she sees it as great bridge-building between agencies that care about their students and the settlement of new immigrants.

Many new immigrants to Canada come from countries where, like medical care, dental hygiene and dentistry services may be out of reach for the average population. Personal knowledge about dental hygiene may also be scant. Howell notes that, after the six weeks, many of the ELSA students were more enlightened about dental hygiene and more aware of programs in community-based dental care available to them. Says Howell, "It was amazing to witness how naturally partnerships such as these can improve the lives of so many."





# EXPLORING THE ROLE OF ENZYMES IN DISEASE

BY MARI-LOU ROWLEY

*Dentistry professor Dieter Brömme, Canada Research Chair in Proteases and Diseases, is studying the enzymes involved in bone growth and deterioration. His basic research could lead to new treatments for a host of degenerative diseases—from osteoporosis and arthritis to jaw necrosis.*

Understanding the inner workings of biochemical processes is like being drawn down into a spiralling vortex of increasingly complex interactions among smaller and smaller bits of matter. On the macro scale, our bones, cartilage and skin provide the framework and support that holds our organs in place and allows them to function efficiently. Deciphering the interplay between genes, proteins and enzymes that form, reform and degrade these tissues is the work of biochemist Dieter Brömme, professor in UBC Dentistry's Department of Oral Biological and Medical Sciences.

The path that led him to UBC is as intriguing as his research. Brömme became fascinated with enzymology as a student at the Institute of Biochemistry of the Martin-Luther-Universität in the former German Democratic Republic. "That institute was renowned for pioneering work in proteases, the enzymes that break down proteins into peptides or amino acids, and traces its very early roots back to Nobel Prize winner Emil Fischer and his students more than a century ago," says Brömme. While there, he went on to study first microbial serine proteases and then cysteine proteases, most notably cathepsin S.



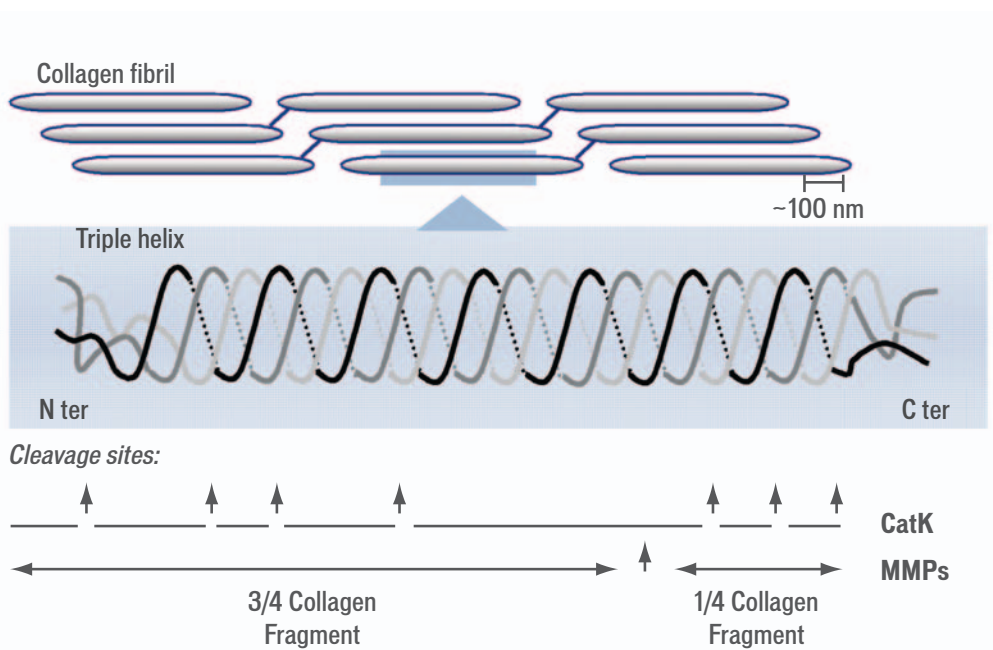
Brömme came to Canada in 1991 to bring cathepsin research to the Biotechnology Research Institute in Montreal, and in 1993, was recruited by a small San Francisco biotechnology company. Between 1994 and 1997, he was leading the research to identify and characterize novel cysteine proteases, including cathepsin K (catK), and to show that catK was a critical enzyme in osteoclast-driven bone resorption and cartilage erosion. From 1997 to 2004, Brömme was a professor at Mount Sinai School of Medicine in New York. He left that position to assume a Canada Research Chair in the Faculty of Dentistry at UBC.

“Our lab is part of the Centre for Blood Research, and we have an affiliation with the Chemical Biology and Disease Group, so we are working with great resources and talented colleagues.”

## Mechanisms of Bone Remodelling

Every seven to 10 years our skeleton is renewed by a process called bone remodelling, a delicate balance between bone resorption and bone formation. In resorption, cells called osteoclasts break down bone, releasing calcium, magnesium, phosphate and collagen products into the blood. Cells called osteoblasts are responsible for bone formation. During childhood, bone formation exceeds resorption, but as the aging process occurs, resorption exceeds formation.

Osteoclasts are involved in tissue destruction associated with osteoporosis, as well as osteoarthritis and other rheumatic and immune-related disorders. For years, researchers have been trying to discern the mechanisms of bone degradation by osteoclasts. “Ninety percent of bone is made up of type I collagen fibres, and the collagens are very resistant proteins that are normally turned over very slowly,” says Brömme. “Part of the reason is that collagen molecules have a complex triple helical structure and they are organized in protease resistant fibrils.”



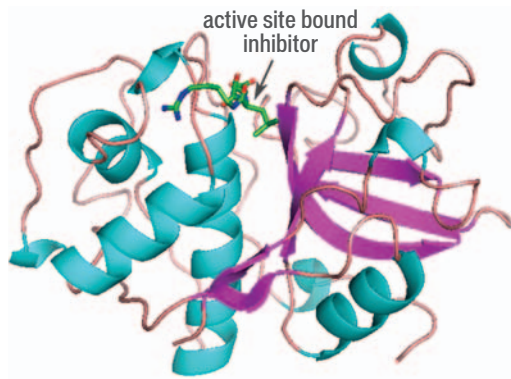
Schematic representation of the degradation of triple helical collagens by catK (multiple cleavage sites) and matrix metalloproteinases (one specific cleavage site).

## Discovering CatK—A Novel Collagen-Degrading Enzyme

Brömme notes that the search for a cysteine-dependent collagenase—a cathepsin that is able to break down collagen molecules efficiently—had been ongoing for over two decades, when a group in Switzerland discovered the gene OC-2 that is highly expressed in osteoclasts. “Everyone thought this was the gene for the enzyme that we had been looking for,” he says. “At that time, matrix metalloproteinases (MMPs) were the only proteases known to be true collagenases, because they cleave within the triple helical collagen molecule.”

“However, MMPs cleave at only one site on the triple helical collagen molecule,” explains Brömme, “whereas catK cleaves at multiple sites, including peptide bonds involved in cross-linking to hold the triple helix together. This makes it much more effective, because it is able to degrade the collagen into very small, soluble pieces.”

Brömme’s research group cloned and characterized the enzymatic properties of



Three-dimensional structure of catK with an inhibitor bound in its active site.

human catK, solved its three-dimensional structure and initiated the search for specific inhibitors that could slow down excessive bone resorption in diseases. This work has applications in dentistry as well. Since the jaw and teeth are made up of bone and hard connective tissue, catK inhibitors could be used to aid healing after tooth extraction. It could also help to prevent jaw necrosis in cancer patients.

## CatK Inhibitors to Treat Osteoporosis

Osteoporosis affects roughly 10 percent of the population in Europe, Japan and North America, and as populations age, the numbers will increase. Bisphosphonates—the current most commonly recommended drug therapy for osteoporosis—acts by indirectly killing osteoclasts, thereby reducing bone resorption. Bisphosphonates are also used in higher doses in anticancer therapies to reduce bone metastasis. Recent studies, however, have indicated that these drugs may actually undermine the integrity of bones, linking bisphosphonates with increased fracture rates and debilitating and disfiguring hip and jaw necrosis.

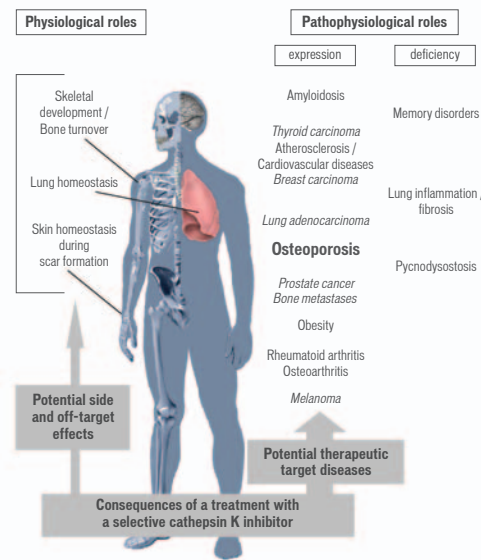
“Clearly, these outcomes are unacceptable, and catK inhibitors are a promising alternative therapy,” says Brömme, noting that some catK inhibitors developed by the pharmaceutical industry are now in various stages of clinical evaluation, including a final phase III trial.

*“A very important factor in a catK targeted inhibitor is that most of the other drugs affect bone formation by suppressing both formation and resorption,” explains Brömme. “CatK inhibitors only affect bone resorption, and thus allow for ongoing bone formation.”*

But catK also has functions other than degrading collagen. In fact, cathepsin K expression has been found in many cell types other than osteoclasts, including skin fibroblasts, macrophages (white blood cells), and dendritic (immune) and epithelial cells. CatK is also known to trigger the release of thyroid hormones and can regulate the expression of important growth factors.

“All catK inhibitors being developed, even those tested in phase III trials, are classic

active-site directed, which means that the enzyme is completely inactivated so that it cannot perform any other function,” Brömme explains. “And this can lead to unforeseen side effects, including skin fibrosis, granulomas and impairment of brain functions.”



Physiological and pathophysiological implications of cathepsin K in humans. Cancers or related diseases are in italics.

## Patenting a ‘Complex’ Approach

Another question researchers had with the active-site approach was how the very small cathepsin K molecule, with an active site of only 5 angstroms in diameter, could cleave the large, cable-like collagen protein three times its size. Brömme’s lab found that the enzyme is not doing it by itself, but forms a complex with bone- and cartilage-resistant glycosaminoglycans, or sugars.

“These negatively charged sugars bind to catK molecules and form a complex, which we think surrounds the collagen fibre and leads to a partial unfolding of the triple helix. This then allows the subsequent cleavage by the

active site of the individual catK molecules,” explains Brömme. For delving deeper into the vortex of molecular interaction, Brömme and his lab were awarded a US patent for this catK complex mechanism.

“Our approach is to prevent the formation of the complex between the glycosaminoglycans and cathepsin K, without interfering with the enzyme’s active site. This would prevent the unfolding and degradation of the collagen, but not interfere with other substrates of this protease and thus reduce side effects,” explains Brömme.

## Cathepsins Linked to Many Diseases

As an associate member of the Department of Biochemistry and Molecular Biology at UBC, the role of catK in bone resorption is only one of Brömme’s current research projects. He is also studying a number of human diseases characterized by excessive degradation of the extracellular matrix, including bone and cartilage diseases, atherosclerosis and destructive lung disease.

For example, his group was the first to link overexpression of catK with rheumatoid arthritis. In addition, they found that when catK’s sister protease cathepsin S runs amok, it can cause improper processing of proteins that can lead to autoimmune disorders.

To better understand the role of proteases in health and disease, Brömme and his lab use an interdisciplinary array of tools (molecular biology, enzymology, crystallography, histology, animal models) and collaborate with clinical and biotech institutions around the world.

*“Our research is very fundamental, and preclinical discoveries depend upon facilities like UBC Dentistry’s new Clinical Research Centre to bring them into practice.”*



# BRIDGING A GAP— DENTISTRY'S PART-TIME FACULTY

BY HEATHER CONN

Imagine a bridge spanning two successful dentistry groups. On one side, extremely bright and talented students, eager to learn, join accomplished full-time faculty, immersed in mostly on-campus dental work. Let's call this combined side the "academic excellence" group, which excels at leading-edge learning and educational rapport.

On the opposite side, let's add the "real-life" group. They're practising dentists with a thriving business in diverse communities, who offer an array of professional dental services to people of mixed ages and cultures.

But something's missing: a blend of both worlds. That's where the human bridge comes in, which functions much like its dental counterpart, restoring support and connection where a gap exists. The bridge is UBC Dentistry's part-time faculty, the working dentists who enrich students' practical know-how while maintaining their own dental businesses.

These part-timers bring the academic and outside worlds together, crossing easily between each realm and sharing on both sides what they know and learn. "They offer a refreshing approach to teaching," says Dr. Jim Richardson, a clinical assistant professor in UBC Dentistry who recruits part-time faculty.

*"Their contributions are really valuable. We can't run the school without them." In any given week, 85 part-timers are working for the faculty, he says.*

Two Vancouver-area dentists, who each received a 2010-2011 sessional teaching award based on UBC Dentistry student votes, enthusiastically share the benefits of interacting with these learners. "The students always give me inspiration," says Dr. Zohreh Ansari, who runs a West Vancouver dental practice with her husband. "When you're with the younger generation, it keeps you going. They are focused. Most are very talented and educated. They have PhDs in other fields. It's amazing."

Dr. Robert Rosenstock, an associate in a three-dentist office in Richmond and past president of the College of Dental Surgeons of BC, says that he looks forward to teaching and enjoys the break from his practice. "The kids

are very, very enthusiastic. They learn very quickly. Most of them are on top of everything and are gung ho about doing things right. It's beautiful to see."

Both Rosenstock and Ansari began at UBC by teaching a half-day a week, but enjoyed it so much, they increased their hours. Their content varies, from second-year ergonomics for Ansari to a third-year "boot camp" that Rosenstock has taught. Both teach students preclinical restorative work, using plastic teeth on mannequin heads, as well as integrated clinical care, in which students provide care for patients from the community for a reduced fee. Overall, students are excited to learn the variations in technique that both dentists share. Rosenstock says: "They have the theory, but you can tell them why something works."

Both dentists say that through teaching they, too, learn valuable new information in cutting-edge dentistry. "You're learning from the experience that you're getting, such as an opinion from a specialist," says Rosenstock, "and you take that knowledge back to the office." Ansari says that teaching helps her stay up-to-date because she learns the same new material as the students.

A passionate teacher throughout her life (she taught English to teenagers in her native Iran), Ansari says: "I love it." She adds that she'll never forget one dental student testimonial, which she recites: "She never intimidates you. She makes you feel

so comfortable. You don't feel that your question is silly."

While a student herself, Ansari says, some instructors in Iran made her feel stupid. This keeps her determined to give her UBC learners respectful attention. Many part-time faculty, including recent UBC Dentistry grads, choose to teach part-time because they have fond memories of dental school and want to recreate positive experiences for new students, says recruiter Jim Richardson.

This sense of giving back is one quality that Richardson looks for in recruiting part-time faculty, besides someone who is a team player, friendly and approachable, computer savvy, has a strong student-centred focus (no "My way or the highway") and performs a wide range of dentistry. "Almost universally, the students really love the part-time faculty," he says.

Rosenstock recommends to potential candidates: Make sure that your business overhead is covered and that you can teach without worrying about the office when you're not there.

*"The full-time people are very appreciative of the time you're putting in," he says, "and they're more than happy to help out." He adds: "You get more out of it than what you put in."*

Those interested in a part-time faculty position are invited to apply online at [www.dentistry.ubc.ca/go/pt](http://www.dentistry.ubc.ca/go/pt)



# GIVING BACK—VOLUNTEER DENTISTS AT HOME AND ABROAD

BY HEATHER CONN

In isolated parts of Nicaragua, she has volunteered to do fillings for children in orphanages who have never been to a dentist. Dozens and dozens of Nicaraguans have waited all day in steamy heat for dental help while she gave portable care in a dirt-filled room with little daylight or electricity. During a volunteer visit to Mexico and repeat trips to Guatemala, she and others have set up mobile clinics (one venue was a high-ceilinged church) with donated dental equipment: a sterilizer, mobile chairs, drills, suction units and instruments.

Liz Johnson-Lee, who graduated from UBC Dentistry in 1992, is no stranger to

50-year-olds with severe gum disease and loose teeth who have never seen a dentist. She has seen how soda pop and refined sugar have ravaged babies' teeth in poverty-stricken families in Latin America, where Coca-Cola is cheaper than milk.

But rather than feel discouraged by such dental conditions, Johnson-Lee eagerly awaits new volunteer opportunities in the developing world, through Dentistry with Heart, and in British Columbia, through UBC Dentistry. As a recent UBC volunteer dentist, she is one of about 30 who help students each year provide much-needed services at community clinics

for low-income or disadvantaged groups around the province.

"It's addictive, this mission work," says the associate who works in two general dental practices (Kitsilano and downtown Vancouver). Seated in an outdoor patio at a Kitsilano Starbucks, she readily shares how she discovered her passion for volunteer dentistry about a decade ago, when her first such trip took her to Tijuana, Mexico. "It hit me how much I received. I felt so fulfilled and so enriched. When you give without expecting anything back in return, that's when you get the most."



Dr. Liz Johnson-Lee

This past July, Johnson-Lee volunteered at a three-day clinic with 10 UBC students (eight in dentistry and two in dental hygiene) at Penelakut (formerly Kuper) Island in the southern Gulf Islands. They set up in a school gym in this underserved community, home to the Penelakut First Nation, seeing mostly teenagers; some of the teens had never been to a dentist. Johnson-Lee worked with three volunteer dentists, alongside a dental hygienist and certified dental assistant, to supervise students one-on-one. "The students were all really thrilled to be able to use their skills in this way," she says. "They were really caring and so enthusiastic. It was great to see."

Besides providing support through each patient's complete treatment process, the volunteers offered education regarding diet and good oral care. (These and other clinics are offered through the non-profit Dental Mission Project Society, involving UBC Dentistry and founded by Richmond dentist Doug Nielsen and his wife Susan Nielsen.)

*"It's the most fun I've had in dentistry," Johnson-Lee says of her volunteer excursions. "There's no billing, dealing with insurance, bookkeeping and charting. There's no scheduling, so you can't be behind."*

Richmond endodontist David Hemerling joined Johnson-Lee at Penelakut as a volunteer. Like her, he brings to his UBC volunteerism a remarkable array of overseas grassroots dentistry. He has spent two-week volunteer sessions in Ethiopia, the Philippines, Mexico and Moldova, a republic between Romania and Ukraine. His developing-world fieldwork has ranged from removing a 10-year abscess from a murderer in prison while a dozen guards with machine guns kept thousands of inmates in check, to providing dental care in a mud hut with little more than a lawn chair, flashlight and a pair of forceps.

Here in British Columbia, he is one of two volunteer dentists who, with a faculty member, supervise about 10 UBC students at the East Side Walk-in Dental Clinic in Vancouver. For six months, he has spent one Saturday a month overseeing students as they do extractions, root canals and fillings at this skid-road storefront. "There is a lot of poverty there, and the suffering is very real, as real as any Third World country," he shares at a Commercial Drive café.



Dr. David Hemerling

Patients are deeply appreciative of the students' work, however, whether they've done a filling, alleviated extreme pain or made an esthetic transformation, says Hemerling, who also teaches endodontics part-time at UBC. He recalls the satisfaction of one patient at the Downtown Eastside clinic, an attractive woman in her 20s: "When she came in, her front tooth was dark brown. She had a root canal, and three hours later, the tooth was white. She was overjoyed and all smiles."

Students appreciate the chance to work outside the university's "very controlled" environment and confer with practising dental professionals, says Hemerling, a 1993 UBC Dentistry grad. "It's very rewarding and satisfying—it truly is. The students are happy, the patients are happy. The students are so great: They're positive, they're motivated. They're extremely polite to the patients. From the bottom of their heart, they want to help these people."

Three-quarters of UBC's dental students have participated in a variety of Saturday volunteer clinics. The grad class of 2011 even donated a portable chair for community clinic use, says Dr. Larry Rossoff, a UBC clinical assistant professor who organizes and oversees student volunteer clinics. "Recent grads are

coming back to volunteer," he says. "I don't think there could be a better measure of our success."

At every community clinic with UBC students, Rossoff says, participating volunteer dentists make comments like "This is really great; I wish that I'd had this when I was a student" and "I love this; it feels so good to give back."

Since its inception three years ago, UBC Dentistry's program of community volunteer clinics has grown from only a few off-site sessions to 16 for 2011-2012. Sites are located adjacent to the Abbotsford Food Bank, at Vancouver Native Health Society on Hastings Street and at Douglas College. In co-operation with the Dental Mission Project, UBC Dentistry will involve volunteer dentists in a new student clinic at Mount Pleasant Community Centre using portable dental equipment donated by G & F Financial Group.

*For those contemplating a volunteer dentistry experience, Johnson-Lee advises: "Go for it. You'll love it. You have so much to offer. Every little bit helps."*

For more information about volunteer dentistry opportunities with UBC, visit [www.dentistry.ubc.ca/cvcp](http://www.dentistry.ubc.ca/cvcp)

PHOTOS BY MARTIN DEE



*Whether in a volunteer capacity or as part of a curriculum component, dental and dental hygiene students reached far and wide in UBC Dentistry's community initiatives this past spring and summer. Here are some photos taken recently at local, provincial and international settings that have enhanced the educational experience of students while increasing Dentistry's community involvement.*



On Saturday, April 16, Douglas College in New Westminster, BC, was the site of a busy community volunteer dental clinic. Dental students, dental hygiene students and volunteer dentists (including alumni and faculty members) provided treatment to many members of the community.

Find out more about UBC Dentistry's Community Volunteer Clinic Program and the dates of upcoming volunteer clinics at [www.dentistry.ubc.ca/cvcp](http://www.dentistry.ubc.ca/cvcp)

During the summer of 2011, a young boy received dental treatment by two UBC dental students, Emma Wong (L) and Leila Shahbazi, who volunteered with three other classmates and a UBC alumnus in the Brazilian town of Praia do Presidio in the state of Ceará. Read more of their story by Nicole Vicenzino on page 35.



Then first-year dental student Jay Chan, during his summer of 2011 volunteer trip to Honduras, watched an examination by a Honduran dentist. Jay travelled with classmate Danielle Coulson; read more of their story on page 35.

Dr. Bradford Scheideman, then a fourth-year student (L), and general practice resident Dr. Fahad Cadili gave toothbrushes to three young Cambodian boys.



Then a fourth-year dental student, Dr. Dustin George (L) travelled to Cambodia with three fellow classmates as part of a fourth-year DMD student elective. They were accompanied by two residents in the General Practice Residency (GPR) Training Program.

Download the fourth-year DMD student report at [www.dentistry.ubc.ca/cambodia2011](http://www.dentistry.ubc.ca/cambodia2011)



As part of Oral Health Month in April, third-year DMD student Amro Foda (L) performed restorative treatment, while first-year DMD student Sangwoo Ham assisted, at the Abbotsford Food Bank dental clinic during a day of free community dentistry.

View more photos and read the story at [www.dentistry.ubc.ca/go/apr2](http://www.dentistry.ubc.ca/go/apr2)

This past summer, for the second year in a row, dental and dental hygiene students volunteered in a First Nations community on Penelakut Island. Read what then second-year DMD student Akash Villing says about the experience on page 35.



Two plastic chairs served as an operator for a dental clinic set up in a community centre in a rural Brazilian village.

The villain Sugar Bug, a "big bad bug" representing plaque and bacteria played by dental student Phil Hou, performed for children during Love Your Smile Day on April 6, 2011, at Ray-Cam Co-operative Centre in Vancouver's Downtown Eastside. As part of Dentistry's Professionalism and Community Service (PACS) program, first-year dental students promoted oral health at the centre using high-energy activities and interactive demonstrations.

Read more about PACS at [www.dentistry.ubc.ca/go/pacs](http://www.dentistry.ubc.ca/go/pacs)



Large models of teeth help dental hygiene students convey their message about oral health to students in local schools and community organizations. Read about dental hygiene students at one such organization on page 17.



## Kanani Conference Rooms: A Legacy for Learning and Giving



Not long ago the old dental clinic in the John B. Macdonald Building (JBM) was decommissioned space, unused and derelict, waiting for complicated, expensive renovations. Students, like Amro Foda when he was in his third year of the DMD program, would walk through the abandoned space on their way to various, insufficient study spaces scattered throughout the Dentistry buildings. Foda wondered why this extensive space lay dormant. “We had a beautiful new dental clinic,” Amro observes, “but we didn’t have adequate study space to match the calibre of the new clinic.” That is, until now.

After years of returning to the drawing board, Dentistry, with the generosity of supporters like Dr. Aly Kanani and his family, overcame the daunting task of dealing with a forest of stubborn concrete-imbedded, steel-framed operatory shells in the venerable JBM. Now, small-group seminar rooms and flexible study space have been built next to a new computer learning centre.

“The seminar rooms are perfect for our groups,” Amro explains. “We can concentrate together on our cases without the noise and distractions we had in other areas. The large monitors make a difference, too, in how we learn.” Both rooms are equipped with the same

technology, so all student groups have the best possible learning environment.

For Aly Kanani, his wife Suphattra and son Aaryan, their gift of supporting the seminar rooms—now called Kanani Conference Room 1 and 2—is an expression of their belief in the power of education as a transformative tool in society. “UBC Dentistry is teaching and training the future leaders of this profession, both in Canada and around the world,” says Aly. As young dentists with a young family, Aly and Suphattra firmly believe that earning a livelihood is not just about supporting one’s immediate family, but is also a means to the goal of giving back.

*“With this gift to the Faculty of Dentistry,” says Aly Kanani, “we hope to inspire others to give generously to worthy causes they support, be it education, social development or any other act of kindness or charity.”*

During the ceremony to unveil the rooms on May 8, 2011, Aly remarked that not only are the new conference rooms a strong legacy for dental students, but they represent, going forward, the commitment and admiration of his family for the Faculty of Dentistry.

Aly credits his and Suphattra’s parents with modelling great support and commitment. They sacrificed tirelessly to provide their children with financial and moral support in pursuing their passions, and instilled in them “a moral code grounded in the ethics of faith.”

The Kanani family’s gift exemplifies the faculty’s focus on providing the very best in oral health education, according to the dean, Dr. Charles Shuler. “These seminar rooms,” says Shuler, “are an innovative and dynamic environment, where an academic partnership of students and faculty will be instrumental, providing an enjoyable experience, encouraging communication, and ultimately, completing the vision and passion of our profession.”



Amro Foda

## Industry Supports UBC Students on Volunteer Dental Mission

When the opportunity came for two DMD students to participate in the well-established volunteer dental program AYUDA, from the University of Southern California (USC), money was not a barrier thanks to the Sinclair Travel Fellowship Program.

In April 2011, then fourth-year dental students Daniel Nosyk and Arash Maskan joined fellow USC dental students in Belize. Together with UBC and USC faculty, Sinclair Dental president Dr. Arjang Nowtash, and community dentists and volunteers from California—a 68-person team—they treated over 850 patients on two offshore islands, Ambergris Cay and Cay Caulker.

Nosyk remarks that the experience and sense of pride gained is difficult to put into words.

For him, the opportunity to interact with other dental student colleagues from USC, with their openness and welcoming attitude, provided an atmosphere very conducive to learning. “This experience has allowed me to grow in ways I never thought I could. The amount of confidence that I found was never imagined prior to going to Belize.”

For Maskan, the collaboration between universities underscored the benefits of his participation. He would like more students to have the opportunity to experience the joy of helping individuals in other parts of the world and to become a more familiar with their culture and life experiences. “These trips,” Maskan says, “also allow for interactions with colleagues educated at a



different university and for great discussions about the similarities and differences of practising dentistry.”

The Sinclair Travel Fellowship Program, a fund established by Sinclair Dental for UBC Dentistry’s fourth-year travel elective, supports the UBC Dentistry goals of broadening the scope of dentistry learning.

*“Sinclair has always been active in the broader community, but I realized we have to focus more on a dental contribution. I felt we can achieve that best by teaming up with UBC Dentistry,” explains Dr. Nowtash.*

## Faculty Member Initiative Funds Equipment for Endodontics

The endodontics specialty program, now in its fourth year, with nine full-time residents, is emerging as one of the top in its field in North America. But Dr. Jeffrey Coil, assistant professor and director of the program, saw that something was missing. That something—a state-of-the-art focused-field cone beam CT (CBCT) unit suited for endodontics—was nowhere in sight, and no money was available in the budget. A CT unit yields detail in images that is far superior to an ordinary dental operating microscope. And, Coil asserts, “will be incorporated into endodontic practice more rapidly according to leaders in the field.”

Coil set to work. If he wanted a Kodak 9000 3D Extraoral Imaging System, he’d have to raise the money himself—the first donation was his own \$5,000. Soon after, his personal solicitation attracted more donors, and his hidden talent as a fundraiser emerged.

With donations from 40 individuals plus the Northwest Endodontics Study Club, the Richmond Endodontic Centre and the

Alaska Avenue Dental Clinic in Fort St. John, Coil has raised just over \$60,000—more than half the price, and enough for Carestream Health Canada to match funds in a partnership enabling UBC Dentistry to purchase the system. Carestream is committed to ensuring innovative education and treatment.

Coil—professor, researcher, educator, and now, fundraiser extraordinaire—looks forward to using the new imaging system. “It is certainly exciting to be involved with graduate education at this time,” he says, thinking of his dream-come-true acquisition.

## MAKE IT COUNT

Help us continue to develop our local community outreach programs that provide access to care for people in need, as well as unique learning opportunities for students. To learn more, contact Jane Merling at 604-822-5886 or merling@dentistry.ubc.ca





# CLASS NOTES AND EVENTS

Share your news with classmates, faculty and friends. Look for reunion announcements and events for all alumni. Submit alumni stories and keep in touch at [www.dentistry.ubc.ca/alumni](http://www.dentistry.ubc.ca/alumni)

## 1970s



Mary Findlay  
Dip DH 1971  
BDS 1998

The Dip DH Class of 1971 chose a mini cruise to celebrate graduating 40 years ago from UBC as dental hygienists. Being on the ship maximized opportunities to be together—to catch up and be thankful for our education. A few of the graduates are still scaling teeth, while many are staying active through golfing, fitness and chasing grandchildren! Pictured from left to right are Casseda Parsons, Janet Loudon, Evelyn McNee, Lorraine Machell, Diane Eade, Ann Bell, Linda Bedry, Mary Findlay and Janice McVean. The photographer was Frances Lawson.



Bill Sherry  
DMD 1971

The DMD 1971 class of UBC Dentistry got together during this year's Pacific Dental Conference to celebrate the 40th anniversary of its graduation from UBC's dental school. Out of a graduating class of 19, contact was established with 17 members, with attendance by 14. The gathering started with a get-together at the Annual Alumni Reception at the PDC (a class picture was taken), followed by dinner at the Royal Vancouver Yacht Club. The warm camaraderie kept the celebration going well into the evening.

### DMD 1972 REUNION

Graduates from the 1972 DMD class will be toasting 40 years at the next Pacific Dental Conference, with a fine dining experience planned for after their class photo session. Plans are also in the works for a reunion trip in 2012.

For more information, e-mail Alan Lowe at [alowe@dentistry.ubc.ca](mailto:alowe@dentistry.ubc.ca) or Garry Sutton at [gcsutton@dccnet.com](mailto:gcsutton@dccnet.com)



Garry Sutton  
DMD 1972

Congratulations to Garry Sutton DMD 1972, winner of the UBC Dentistry Getaway Contest. He is the lucky recipient of two airline tickets on WestJet, compliments of North South Travel.



Gerry Chu  
DMD 1976

The '76ers gathered at the Predator Ridge Resort in Vernon from June 16 to 19 for golf, bike riding, hiking, winery tours, shopping and getting reacquainted. Terry Curran gave a presentation on wealth preservation and creation, which was followed by a sunset BBQ buffet and a tour of the incredible new Sparkling Hills Resort. Twenty-nine people attended. The good times and golfing led to comments like "We should make this an annual event!"

### KEEP IN TOUCH

[www.dentistry.ubc.ca/alumni](http://www.dentistry.ubc.ca/alumni)

## 1980s



Andrea Hayden  
Dip DH 1981

The Dip DH Class of 1981 started our 30-year reunion celebration at the Pacific Dental Conference, then went on to the alumni reception and followed up with dinner at the Show Case Restaurant & Bar in the Marriott Pinnacle hotel. Sixteen of us enjoyed catching up and reminiscing about those bygone days in the basement of the John B. Macdonald Building. We honour the bonds we have formed and look forward to the next reunion.

### DMD 1982 REUNION

The Class of 1982 is planning a weekend trip to celebrate their 30-year reunion next year. The location is yet to be decided.

Those interested in attending should contact Doug Conn DMD 1982 at [docconn@oakridgeendo.com](mailto:docconn@oakridgeendo.com)



Jim Richardson  
DMD 1984, MET 2011

Jim Richardson greets Sarah Morgan-Silvester, Chancellor of UBC, after receiving his Master of Educational Technology degree at the spring 2011 congregation.



Bob Coles  
DMD 1986

The DMD Class of 1986 celebrated their 25-year anniversary at Goldfish Restaurant following the alumni reception at the Pacific Dental Conference. Twenty-two graduates attended and shared an enjoyable evening reminiscing and catching up. The consensus: the women all looked great, while most of the men were showing signs of "experience"! In honour of the anniversary and to recognize our successes since graduation, classmates donated to a class gift. We raised \$31,000 and created a legacy fund to provide a gift in perpetuity to a deserving second-year student who best exhibits traits of leadership and community involvement. The DMD Class of 1986 challenges other classes celebrating a significant milestone to consider doing likewise. *Tuum est!*

### DMD 1987 REUNION

The graduates from the 1987 DMD class will be toasting 25 years next year.

For more information, e-mail Lange Soo DMD 1987 at [langesoo@shaw.ca](mailto:langesoo@shaw.ca) or Jenn Parsons at [alumni@dentistry.ubc.ca](mailto:alumni@dentistry.ubc.ca)

## 1990s



Sigrid Coil  
Sandra Finch  
DMD 1991

Reunion organizers Sigrid and Sandra organized a dinner at Oru Restaurant in the Fairmont Pacific Rim following the alumni reception at the PDC. To honour their 20-year anniversary, the class also raised \$2,400 in support of the Dean's Bursary Fund. Pictured from left to right are Leetty Huang, Mahsa Soraya, Elisa Yu and Susan Leung.



Diane Bird  
Stacie Ross  
DMD 1996

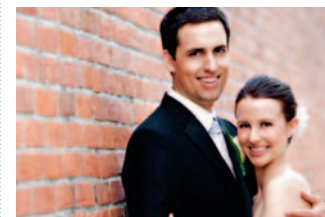
Diane (pictured right): The Pan Pacific Hotel put together an awesome reception for the 34 out of 37 Class of 1996 grads who attended the 15-year reunion. Together, the class raised \$1,000 for the Dean's Bursary Fund. Thanks go to Protec Dental Laboratories, Patterson Dental and Nadean Burkett & Associates for contributing great door prizes. It was wonderful to see everyone and catch up. We are planning to have our 25-year reunion at the same place!

## 2000s



Suzy Hupfau  
DMD 2001

The Class of 2001 celebrated their 10-year reunion at the Pacific Dental Conference on March 11. We all gathered at Boneta, a restaurant in Gastown, and had a great meal and good times. There was an amazing turnout, with 26 people attending, and we all decided that we'd get together for a class reunion every five years. I think we would all agree that it doesn't seem like 10 years have gone by!



Graham Grabowski  
DMD 2008  
Amy Bellamy  
DMD 2011

Graham and Amy married on May 14, 2011, in the Canadian Memorial Church in Vancouver. A reception followed at the UBC Boathouse. With 27 DMD alumni in attendance, it would have been easy to mistake the party for a dental convention!



Andrei Ionescu  
DMD 2008  
Christine (Hibberd)  
Ionescu  
DMD 2009

Third- and fourth-year DMD students are buddied up during Integrated Clinical Care, sharing the patient pool and charts. For Andrei and Christine, this relationship didn't end with graduation: Andrei married his former ICC junior buddy on March 12, 2011, in The Distillery district of Toronto. Many UBC dental alumni made the journey to celebrate their wedding, including bridesmaid Jennilee Jamison DMD 2009 and groomsmen Aldwin Chan DMD 2008 and Edward Cheng DMD 2008. After a fabulous wedding surrounded by family and friends, Andrei and Christine enjoyed a honeymoon in Iceland. The newlyweds are living happily in Toronto.



Emery Bland  
DMD 2010

Good luck to Emery, who is running the Angkor Wat International Half Marathon on December 4, 2011, in Siem Reap, Cambodia, to raise funds for the local children's hospital. While a student, Emery did a fourth-year elective at the hospital. He is seeking support from the dental community to help reach his fundraising goal. In his words: "It costs \$5,000 to run this hospital for one day. I'd love support from the dental community, because not only are lives saved at this hospital, but children's dental needs that would otherwise be neglected are being met." To help Emery reach his goal, donate online at [www.dentistry.ubc.ca/ahc](http://www.dentistry.ubc.ca/ahc) or e-mail him at [westbland@hotmail.com](mailto:westbland@hotmail.com)

### PLANNING A REUNION?

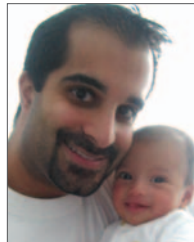
For ideas, contact Jenn Parsons, manager of Alumni & Community Affairs, at 604-822-6751 or [alumni@dentistry.ubc.ca](mailto:alumni@dentistry.ubc.ca)





Greg Marasa  
DMD 2010

Congratulations to Greg and Kristi on the birth of their baby girl, Isabel Lynne, born March 26, 2011, in Langley Memorial Hospital. Ingrid Emanuels DMD 1980 and Frank Marasa DMD 1979 are also proud grandparents. Could this be a third generation of dentists to come?



Zul Kanji  
MSc 2011

Zul is pleased to announce the birth of his little girl, Niyah, born on May 21, 2011, at BC Women's Hospital & Health Centre.



Kevin Lee  
DMD 2011

When my classmates Kevin Ko and Alex Chen and I arrived in New York City, we were welcomed at a casual alumni dinner with recent graduate Anne Kelly DMD 2010. Anne captivated us with stories of working as a general practice resident in the Big Apple.

Now that we've had a taste of the real world and seen the standard of education of graduates from other dental school across the continent, we have concluded that UBC has trained us really well and is one of the best dental schools in North America.



Arash Maskan  
DMD 2011

Daniel Nosyk (from my class) and I were the lucky two students that accompanied Dr. Bill Brymer and the dean, Dr. Charles Shuler, to Belize this past year. The experience gave us an opportunity to provide dental care for individuals who do not readily have access to such care. At the same time, we enjoyed the company of colleagues and friends from both UBC and the AYUDA outreach program of the University of Southern California. I am very thankful for being given the opportunity to volunteer on this trip and am looking forward to perhaps working with colleagues to start similar, smaller-scale programs at UBC.



Chris Shon  
DMD 2011

The Class of 2011 thought it would be a fun idea to revive the tradition of leaving a graduation gift to the school. After a class vote, the most popular gift idea was a mobile dental chair that students could use on dental missions and in the Professionalism and Community Service program. We hope that this dental chair gets a lot of use and that the classes following us will carry on the tradition of leaving a gift to UBC Dentistry.

#### FOLLOW US ON TWITTER

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Find Jenn Parsons, manager of Alumni & Community Affairs, on Facebook.

## In Memoriam



Carl K. Cramer  
(1952 - 2011)  
DMD 1979

Carl Cramer graduated from UBC as a dentist and received an MSc in Health Care and Epidemiology from the UBC Faculty of Medicine. A former faculty member of the BC Open Learning Agency Certified Dental Assisting Program and the University of Mississippi Medical Center School of Dentistry, Carl's background included general clinical dental practice, organized dentistry, research, teaching and course writing. He authored publications on epidemiology and ethics, and until his death, was a clinical assistant professor in UBC Dentistry and an associate member with the Faculty of Medicine. He also facilitated an online epidemiological skills enhancement program for health professionals with the Public Health Agency of Canada. Carl was a recipient of a Henry M. Thornton Award and was recognized by the BC Certified Dental Assistant Association for significant contribution to the profession. Married to Gillian for 20 years, he was twice a kidney transplant recipient who enjoyed travel to Europe and the United States. Throughout his professional career, he enjoyed interacting with students, colleagues and patients and is particularly remembered for being conscientious in all things.

## Almost Alumni



Sunpreet  
Bains-Dahia  
DMD 2013  
candidate

Congratulations to third-year student Sunpreet Bains-Dahia, winner of a Surrey Board of Trade Top 25 Under 25 Award.



Nicole Vicenzino  
DMD 2012  
candidate

On July 1, 2011, Sophie Dong, Leila Shahbazi, Yili Wang, Emma Wong and I, all fourth-year UBC dental students, and Emery Bland DMD 2010, set out across continents to provide dental services to a rural village in Brazil. After 34 hours of travelling, we had arrived in the little town of Praia do Presidio in the state of Ceará and immediately set out to see our dental clinic. It was definitely not like UBC's highly advanced dental clinic, so we realized we had to be extremely adaptive. Our clinic was located in a community centre, with four separate rooms linked together by an outdoor hallway. We did scaling and root planing in the designated classroom, restorations in the dental room that contained a compressor, extractions in the medical office that was equipped with a bed with stirrups, and finally, sterilization in the back room. Every morning there were children and adults waiting for their dental treatment. Some people walked 10 kilometres and waited all day to get free treatment. The ones who needed a lot of treatment came on multiple occasions. Within five full days, we saw a total of 136 patients, completed 60 extractions and 70 restorations, and scaled adults and children who had never had a cleaning before. Our trip taught us to be adaptive, compassionate and to problem solve, but above all, it was a way to give back and contribute to the international community.



Akash Villing  
DMD 2013 candidate

The Penelakut Island volunteer clinical experience was one I will always remember. It was a rare opportunity to both give and gain. When we arrived, I wasn't sure what to expect, but the locals quickly helped

me relax. The oral hygiene on the island was clearly lacking, and as a result, many of the residents were suffering from very preventable disease. We noted, however, that many of the returning patients had vastly improved their oral hygiene since last summer. This assured us that we were making a difference, which increased our sense of confidence when talking to patients about their daily care. From a student's perspective, it was a great learning opportunity, with third- and fourth-year DMD and dental hygiene students working together for a common goal. Everyone shared thoughts, opinions and experiences, and ultimately we left feeling confident we had given patients the best treatment we could. We all felt very grateful to both the people of the island and the Chemainus Rotarian families that took care of us. From every perspective this trip was special, and I definitely look forward to expanding on this experience next year.



Jay Chan  
DMD 2014 candidate  
Danielle Coulson  
DMD 2014 candidate

Just this past summer, the two of us, along with a group of UBC medical students, travelled to Honduras for three weeks to promote medical and oral health education to women and children in two rural farming communities. Through a partnership with a Honduran NGO called PRODIM, we teamed up with local dentists and provided fluoride treatment to every grade five and six student in both communities. In total, the two of us reached out to more than 500 children, and every child received their own toothbrush and toothpaste—courtesy of Colgate-Palmolive Canada. This surely would not have been possible without the support of faculty members and Dentistry's alumni relations!

#### SHARE

Send an alumni story or update for "Class Notes" to alumni@dentistry.ubc.ca

## Recent Events



#### Sunshine Coast Study Club and Alumni & Friends Dinner

Last February, dentists from Gibsons and Sechelt on the Sunshine Coast were honoured to have Dr. Charles Shuler give a scintillating presentation on oral pathology. Later that evening, they feasted on salmon Wellington and osso bucco at the home of Denise Chiasson DMD 1985 and her husband Don Beadle. After dinner, they enjoyed the wondrous sounds of the Coast String Fiddlers, a local youth performance group, playing traditional Celtic music.



#### Northern Night in the Box

Alumni and friends from northern British Columbia flew down for a Vancouver Canucks vs. Calgary Flames hockey game in February. David Baird DMD 1980, Rick Tabata DMD 1992, Rob Myers DMD 1998, Lydia Naccarato DMD 1985, Dr. Greg Ames, Richard Wilczek DMD 1981, Frank Pyde DMD 1981 and Anne Starr DMD 1995 all enjoyed conversation, cheering their favourite hockey team and reconnecting with UBC Dentistry. Even though the Canucks won, Flames fans still left smiling!

#### VISIT THE PHOTO GALLERY

View photos of past events at [www.dentistry.ubc.ca/alumni](http://www.dentistry.ubc.ca/alumni)





#### Alumni at the CDE in Maui

UBC Dentistry alumni attended Adventure & Learn Hawaii 2011, a UBC Dentistry Continuing Dental Education travel and learn conference held in February 2011 at the Fairmont Kea Lani in Maui.



#### Annual Alumni Reception Pacific Dental Conference

Over 600 alumni and friends joined in the fun at the Annual Alumni Reception this past March at the PDC. The country of France was the theme, and volunteers looked great in berets and scarves. Nadean Burkett & Associates sponsored the getaway contest—a trip to Las Vegas with accommodation at the Paris Las Vegas hotel. Contest winners were Mario Sertic and Renate Simmons, both DMD 1999.



#### 2nd Annual Luau Dinner Prince George & District Dental Society

On September 10, 2011, over 80 alumni and friends attended the Prince George & District Dental Society's 2nd Annual Luau Dinner at the home of Lydia Naccarato DMD 1985 and Dr. Jannie Burg. The dean, Dr. Charles Shuler, attended the BBQ (seen on the right with Andrew Tkachuk DMD 1990). Dr. Diane Kjørven, president of the society, handed out leis to each guest.



#### Tooth Fairy Gala

The Faculty of Dentistry hosted two tables at the BC Dental Association Tooth Fairy Gala. Pictured are Mark Kwon DMD 1997 and his wife Jinnie, who bought cakes in the cake auction raising money for the Save a Smile Program.



Derek Decloux  
DMD 2011

Sam Heron  
BDSc 2012 candidate

#### UBC Alumni Weekend

Derek: Over the past few years, I've been grilled by professors on various subjects, ranging from the best method to achieve a purchase point on a root tip, to occlusal factors that will determine prosthodontic treatment options, and even ethical issues pertaining to patient autonomy... So, when I was presented an opportunity to join a rock band and jam with those same professors, I didn't think twice about the good fortune I'd been afforded. With the same professionalism and persistence they demonstrate in the classroom and clinic (though with a few more jokes), they included me in refining an impressive set list, and we put on an exceptional show that afternoon during Alumni Weekend in spite of a limited amount of rehearsal time. My thanks to the Lost Faculties for giving me the chance to join the band and for encouraging me the whole way through!

Sam: Transforming into the Tooth Fairy for the May 2011 UBC Alumni Weekend was fun and rewarding. It was great to experience teaching children about their oral care in such a fairy-tale environment. I could see parents were having just as much fun as the little ones. I look forward to being part of something like this again!

## Events for Students and Alumni

#### DUS WELCOME BACK BZZR GARDEN & YEARBOOK PICK-UP

Friday, September 16, 2011 · 5:30 pm  
Student Lounge, John B. Macdonald Building  
UBC Point Grey Campus  
For more information, e-mail  
alumni@dentistry.ubc.ca



#### 9TH ANNUAL ALUMNI & FRIENDS GOLF TOURNAMENT

Sunday, September 18, 2011 · 1 pm  
(shotgun start)  
Morgan Creek Golf & Country Club, Surrey, BC  
For more information and to reserve your foursome to this sell-out event, contact  
alumni@dentistry.ubc.ca



#### UBC DENTISTRY FAMILY DAY

Saturday, September 24, 2011 · 2 - 5 pm  
Nobel Biocare Oral Health Centre  
UBC Point Grey Campus  
All DMD and Dental Hygiene alumni, students, staff, faculty and their families are invited to an open house. Join the dean and our students for a tour of the clinic. Bring your children and enjoy activities planned by the Tooth Fairy and her pixies.  
For more information, contact Alison Kovacs at akovacs@dentistry.ubc.ca or Jenn Parsons at alumni@dentistry.ubc.ca  
A complimentary CDE (continuing dental education) course will be offered at Family Day: Karen M. Campbell DDS MSc FRCD presents "The Next Generation of Pediatric Dentistry: Perspectives on the Dynamics of Change" from 3 to 4 p.m. One hour of instruction rewarded.



#### 4TH ANNUAL BATTLE OF THE BANDS: FACULTY/ALUMNI VS. STUDENTS

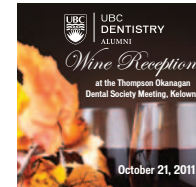
Friday, January 13, 2012 · Doors open at 7 pm  
(first band at 8 pm)  
Ballroom, Thea Koerner Graduate Student Centre, UBC Point Grey Campus  
Tickets on sale soon!

## More Events for Alumni



#### TASTE OF VANCOUVER ISLAND ALUMNI & FRIENDS RECEPTION

Saturday, October 1, 2011 · 4 - 6 pm  
Inn at Laurel Point, 680 Montreal Street  
Victoria, BC  
Join Dr. Charles Shuler, dean of UBC Dentistry, and fellow Victoria & District Dental Society alumni and friends at the Taste of Vancouver Island reception. Local food will be prepared by Inn at Laurel Point chef Takashi Ito, and wine from Cherry Point Vineyards will be served.  
For more information, e-mail organizers Sunny Tatra DMD 2003 at gtatra@shaw.ca or Anna Rankin DMD 2010 at shortrankin@hotmail.com



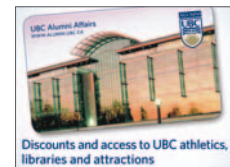
#### ALUMNI WINE RECEPTION AT TODS MEETING, KELOWNA

Friday, October 21, 2011 · 5:30 - 7:30 pm  
Chilcotin Room, Delta Grand Okanagan Resort and Conference Centre  
Join Dr. Charles Shuler, dean of UBC Dentistry, and fellow Okanagan alumni for a glass of wine, hors d'oeuvres, cheese and conversation following the 2011 Thompson Okanagan Dental Society (TODS) Annual Dental Meeting. Conference registration is not required to attend the reception. For conference registration, go to [www.todsmeeting.com](http://www.todsmeeting.com). For information about the reception, e-mail alumni@dentistry.ubc.ca



#### UBC ALUMNI ASSOCIATION WINE ORDERS

The UBC Alumni Association has partnered with Bounty Cellars in Kelowna to create alumni-branded wine. To order, go to [www.alumni.ubc.ca/rewards/wine.php](http://www.alumni.ubc.ca/rewards/wine.php) and follow the ordering information.



#### UBC ALUMNI ASSOCIATION ACARD

The Alumni ACard, which is free for all UBC alumni, gives you access to discounts from several partners, as well as a host of UBC services and venues. To learn about these and all the benefits of the Alumni ACard, go to [www.alumni.ubc.ca/services/acard](http://www.alumni.ubc.ca/services/acard)



#### ANNUAL ALUMNI RECEPTION PACIFIC DENTAL CONFERENCE 2012

Friday, March 9, 2012 · 6 - 8 pm  
Second Floor Lobby, Vancouver Convention and Exhibition Centre  
Commemorative anniversary class photos to be taken of 1972, 1977, 1982, 1987, 1992, 1997, 2002, 2007 and 2011.  
No RSVP is necessary, but if you would like to organize a class reunion to follow the reception, contact Jenn Parsons at alumni@dentistry.ubc.ca

#### MENTORSHIP PROGRAM

The UBC Faculty of Dentistry & BC Dental Association Dental Mentorship Program, sponsored by CDSPI, is recruiting dentists to be mentors. If you are interested in being paired up with a student, contact Alex Hemming at [ahem@dentistry.ubc.ca](mailto:ahem@dentistry.ubc.ca)

## Stay in Touch

The alumni relations department at UBC Dentistry can help you stay connected with your fellow graduates, plan and promote reunions, and keep you informed of upcoming educational opportunities. To learn more, contact Jenn Parsons, manager of Alumni & Community Affairs, at 604-822-6751 or [alumni@dentistry.ubc.ca](mailto:alumni@dentistry.ubc.ca)

Stay connected to more than 2,300 alumni. Share your news, thoughts or comments. [www.dentistry.ubc.ca/alumni](http://www.dentistry.ubc.ca/alumni)

#### COMMUNITY PARTNERS



#### ALUMNI PARTNERS





*Thank you to all our volunteers and industry supporters.* **8TH DR. RICHARD V. TUCKER THIRD-YEAR CAST GOLD COURSE** • Dr. Randall Allen • Dr. Gregory Card • Dr. Ross Fraser • Chris Hacker DMD 1981 • Erik Hutton DMD 1983 • Andrew Kay DMD 1981 • Dr. Peter Kearney • Terry McKay DMD 1975 • Dr. Richard Nash • Mark Norris DMD 1979 • Suzanne Philip DMD 1986 • Dr. Michael Thomas • David Thorburn DMD 1981 • Dr. Geoffrey Tupper • Lawrence Vanzella DMD 1974 • Lino Vanzella DMD 1982 • Dr. Ross Wright • Brasseler Canada • E C Moore Company • Kerr Corporation • Patterson Dental Canada Inc. • Salix Dental Laboratory Ltd. **BC DENTAL COMPONENT SOCIETY VOLUNTEERS** • Don Bland DMD 1971 • Cory Brown DMD 2009 • Denise Chiasson DMD 1985 • Anne Kelly DMD 2010 • Lydia Naccarato DMD 1985 • Becky Olacke DMD 2010 • Anna Rankin DMD 2010 • Sunny Tatra DMD 2003 **COMMUNITY VOLUNTEER CLINICAL PROGRAM-NEW WESTMINSTER** • Dan Berant DMD 2013 • Adam Byam DMD 2012 • Amanda Casciani DMD 2011 • Joshua Garcha DMD 2012 • Zahra Hosseini DMD 2012 • Steven Huang DMD 2014 • Tracy Kim DMD 2014 • Hap Kler DMD 1994 • Kevin Lauwers DMD 2005 • Chris Low DMD 2014 • Deb McCloy MSc 2004 • Betty Pan DMD 2011 • Paul Pang DMD 2011 • Wendy Rondeau DMD 1979 • Dr. Larry Rossoff (faculty) • Chris Shon DMD 2011 • Allison Skrenes DMD 2011 • Mike Stearns DMD 2014 • Dr. Ken Stones • Hanah Tsao DMD 2011 • Candace Woodman DMD 2007 • Tim Yan DMD 1989 **COMMUNITY VOLUNTEER CLINICAL PROGRAM-VANCOUVER** • Laura Bowman DMD 2013 • Adam Byam DMD 2012 • Stefan Caney DMD 2013 • Angela Chai DMD 2012 • Stephanie Cheng DMD 2011 • Lisa Cho DMD 2014 • Marco Chung DMD 2012 • Lauren Cindrich DMD 2014 • Flore-Anne Foellmi DMD 2013 • Travis Gibson DMD 2012 • John Guenther DMD 2013 • Sarah He DMD 2013 • David Hemerling DMD 1993 • Victoria Ho DMD 2011 • Phil Hou DMD 2014 • Scott Kollen DMD 2013 • Oxana Korj DMD 2011 • Andrew Lee DMD 2014 • Mike Magnusson DMD 2011 • Paul Mikhail DMD 2012 • Paul Pang DMD 2011 • Chandni Parekh DMD 2012 • Peter Park DMD 2011 • Wendy Rondeau DMD 1979 • Harlene Sekhon DMD 2014 • Dr. Charles Shuler (faculty) • Mike Stearns DMD 2014 • April Wang DMD 2011 • Emma Wong DMD 2012 **DEAN’S ADVISORY BOARD** • Richard Busse DMD 1986 • Dr. Ken Chow • Susan Chow DMD 1972 • Bob Coles DMD 1986 • Brenda Currie Dip DH 1976 BSc 2004 MSc 2007 • Ms. Carrie De Palma • Mr. Craig Dewar • Hank Klein DMD 1978 • Oxana Korj DMD 2011 • Mark Kwon DMD 1997 • Mrs. Sophia Leung CM • Dr. Jin Li-Jian • Mr. Tuomas Lokki • Mr. Hyo Maier • Mr. David Poole • Mr. Kishore Pranjivan •

# THANK YOU

Tom Roozendaal DMD 2001 • Nick Seddon DMD 2006 • Chris Shon DMD 2011 • Dr. Chuck Slonecker • Margit Strobl BSc 2008 • Mr. Ron Suh • Dr. Tim Tam • Ash Varma DMD 1983 • Dr. Bill Wong • Benjamin Yeung DMD 1983 • Ron Zokol DMD 1974 **MAKING DENTAL APPOINTMENTS PRESENTATION** • Maria Huellas BSc 2013 • Ambreen Khan BSc 2013 **PACIFIC DENTAL CONFERENCE** • Danae Brownrigg DMD 2013 • Ersilia Cocco DMD 2012 • Sophie Dong DMD 2012 • Sarah Garbelya DMD 2012 • Cameron Garrett DMD 2012 • Travis Gibson DMD 2012 • Kathryn Hunter DMD 2012 • Shahab Keshmiri DMD 2012 • Melissa Milligan DMD 2012 • Nick Piemontesi DMD 2012 • Adrienne Robb DMD 2012 • Leila Shahbazi DMD 2012 • Jorell Valdes DMD 2012 • Nicole Vicenzino DMD 2012 • Yili Wang DMD 2012 • Evan Wiens DMD 2012 • Emma Wong DMD 2012 • Vivian Yip DMD 2012 • Hui Zhang DMD 2012 **SUMMER STUDENT PRACTITIONER PROGRAM** • Dr. David Bobyn • Dr. Dan Catona • Ray Chow DMD 1993 • Dr. Don Eagleton • Zoltan Keresztes DMD 1982 • Dr. Dan Kinkela • Ian Leitch DMD 1983 • Henry Ma DMD 2003 • John McDowell • Robert Pipars DMD 1978 • Mehr Poulad DMD 2010 • Anne Starr DMD 1995 • Andrew Tkachuk DMD 1990 • Dr. Eugene Tymkiw • Richard Wilczek DMD 1981 **UBC ALUMNI WEEKEND** • Andre Arseneault • Ruby Banzon BSc 2012 • Alexandra Barone • Quinn Beasley • Shamus Bob • Arielle Brown BSc 2012 • Austin Chang • Greg Chang DMD 1986 • Lauren Chang • Nicole Chang • Ryan Chang • John Charlebois • Nicole Chien BSc 2012 • Brian Chow • Lyle Courchene • Ben Courtenay • Derek Decloux DMD 2011 • Tannis Dobson • Chloe Doucet • Freya Duff • Marchel Eang • Sayena Faraji BSc 2013 • Lee-anne Garnett • Sophie Garnett • Emma Germaine • Sam Heron BSc 2012 • Dr. Duncan Higgins • Maria Huellas BSc 2013 • Priscilla Kaljanac BSc 2012 • Ambreen Khan BSc 2013 • Christine Konrad • Natasha Lee BSc 2012 • Bill McDonald DMD 1977 • Michael Morgan • Nicholas Morton • Madison Narayan • Nathalie Pierre • Alycia Pothier • Anne Pothier • William Rosebush DMD 1983 • Dr. Larry Rossoff (faculty) • Erin Rowsell • Finn Sherbot • Christmas Sinclair • Mickey Sinclair • Lindsey Stacey • Kenneth Sutherland • Jhustine Tolentino BSc 2012 • *Those listed with DMD years from 2012 through 2014 following their name are candidates for graduation in the specified year. UBC Dentistry is thankful to all who volunteered their time. We apologize if your name or organization was missed.*

## CONTINUING DENTAL EDUCATION 2011 - 2012

This calendar is subject to change.  
For updates to fall 2011 and spring 2012 course offerings, visit [www.dentistry.ubc.ca/cde](http://www.dentistry.ubc.ca/cde)

### OCTOBER 2011

- 1 (SATURDAY)  
Occlusion and Function  
Dr. John Nasedkin
- 22 (SATURDAY)  
The New Perio Medicine Protocol–  
Consistently Better Patient Outcomes  
Dr. Timothy Donley

### NOVEMBER 2011

- 5 (SATURDAY)  
Bread and Butter Dentistry  
Dr. Mark Duncan
- 14 - 15 (MONDAY - TUESDAY)  
Introduction to Dental Microscopy and Advanced Endodontics: A Two-Day Hands-On Workshop  
Dr. Jeffrey Coil  
Location: New Delhi, India
- 16 (WEDNESDAY)  
Host Modulation Therapy (HMT) in the Treatment of Periodontitis and the Systemic Benefits  
Dr. Lorne Golub  
  
Aesthetics and Function of Ceramic Restorations  
Dr. Chris Wyatt  
Location: New Delhi, India
- 19 (SATURDAY)  
Dental Pharmacology–Better Medicine, Better Dentistry  
Dr. Mark Donaldson

### DECEMBER 2011

- 1 - 3 (THURSDAY - SATURDAY)  
Managing a Successful Dental Practice–  
Developing a Business Worth Smiling About  
*See back cover for more details.*

## CLINICAL PARTICIPATION COURSES 2011 - 2012

- September 2011 - August 2012  
Advanced Orthodontics for the General Practitioner  
Dr. Clement Lear
- September 2011 - August 2012  
Basic Orthodontics for the General Practitioner  
Dr. Paul Witt
- October 2011 - March 2012  
Cutting-Edge Periodontal Surgery for the General Practitioner  
Dr. Jim Grisdale

### DECEMBER 2011 *continued*

- 3 (SATURDAY)  
Advanced Local Anaesthesia–A Hands-On Course  
Dr. David Isen
- 10 (SATURDAY)  
Lasers in Dentistry–Seeing the Light!  
Dr. Glenn van As

### JANUARY 2012

- 19 - 21 (THURSDAY - SATURDAY)  
  
Managing a Successful Dental Practice–  
Developing a Business Worth Smiling About  
*See back cover for more details.*

### JANUARY - FEBRUARY 2012

- January 30 - February 3 (MONDAY - FRIDAY)  
Adventure & Learn: Hawaii 2012
- Periodontics  
Dr. Hannu Larjava
- Functional Anterior Aesthetics–The Nuts and Bolts  
Dr. Edward Lowe
- Oral Cancer: Why Haven’t the Clinical Outcomes Improved?  
Dr. Charles Shuler
- Location: The Fairmont Kea Lani, Maui, Hawaii
- February 17 - 18 (FRIDAY - SATURDAY)  
Ski & Learn
- Aesthetics in Implant Dentistry and Periodontal Surgery  
Dr. Tassos Irinakis  
Location: Four Seasons Resort Whistler, Whistler, BC

## STUDY CLUBS 2011 - 2012

- October 2011 - May 2012  
Advanced Fixed Prosthodontics for the General Practitioner  
Dr. Chris Wyatt
- October 2011 - May 2012  
Basic and Advanced Periodontics for the General Practitioner  
Dr. Tassos Irinakis
- November 2011 - May 2012  
Occlusion and Function  
Dr. John Nasedkin
- For dates, times and locations of Clinical Participation Courses and Study Clubs, visit [www.dentistry.ubc.ca/cde](http://www.dentistry.ubc.ca/cde)

### FEBRUARY 2012 *continued*

- 23 - 25 (THURSDAY - SATURDAY)  
Managing a Successful Dental Practice–  
Developing a Business Worth Smiling About  
*See back cover for more details.*

### APRIL 2012

- 27 - 29 (FRIDAY - SUNDAY)  
Inhalation and Oral Sedation in Dentistry  
Dr. David Donaldson, Dr. Mark Donaldson, Dr. Fred Quarnstrom

## FOR REGISTERED DENTAL HYGIENISTS AND CERTIFIED DENTAL ASSISTANTS

### OCTOBER 2011

- Local Anaesthesia for Registered Dental Hygienists  
1 - 2 (SATURDAY - SUNDAY)  
Lecture and clinical sessions
- 28 - 29 (FRIDAY - SATURDAY)  
Written and clinical examinations

### MAY 2012

- Orthodontic Module for Certified Dental Assistants and Registered Dental Hygienists
- Spring dates for Lecture Sessions, Clinical Session A and Clinical Session B, will be posted on [www.dentistry.ubc.ca/cde](http://www.dentistry.ubc.ca/cde)

## 2011 FALL THURSDAY EVENING LECTURE SERIES FOR DENTAL HYGIENISTS

### SEPTEMBER 2011

- 29 (THURSDAY)  
Dental Hygiene–The Essentials for Practice Success  
Ms. Paddy Briggs, Ms. Debbie Preissl

### OCTOBER 2011

- 13 (THURSDAY)  
Dental Care From A-Z for Special Needs Children Without the General Anaesthetic  
Ms. Kayla Ragosin-Miller

### NOVEMBER 2011

- 3 (THURSDAY)  
Oral Cancer: Why Haven’t the Clinical Outcomes Improved?  
Dr. Charles Shuler

### DECEMBER 2011

- 8 (THURSDAY)  
Elder Care in Dentistry  
Dr. Michael MacEntee

FOR FULL DETAILS OF CDE COURSES AND TO REGISTER VISIT [DENTISTRY.UBC.CA/CDE](http://DENTISTRY.UBC.CA/CDE)

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