Dean’s Message

Dear Colleagues,

I am pleased to provide you a copy of the inaugural issue of Impressions from the University of British Columbia, Faculty of Dentistry.

You have no doubt already noticed a major change in the appearance of this publication. This new look and feel is consistent with our approach to oral health care in the 21st century—and is consistent with the forward thinking of all the members of our Faculty. We have replaced the previous Good Impressions newsletter with what we believe is a more informative publication about the accomplishments of the Faculty of Dentistry.

In each issue of Impressions, we will focus on activities that directly address our three strategic priorities: Enhancing the Student Experience, Amplifying Research Productivity, and Increasing Community Involvement. The feature articles will highlight the UBC Faculty of Dentistry’s recognized leadership and key role in shaping the future of the profession.

The article describing Dr. Karen Gardner’s development of an international peer review program will show how dental students from around the world share their educational experience. In so doing, they begin to develop the skills in self and peer critique that are so essential to becoming an outstanding oral health care professional.

The article on Dr. Chris Overall’s basic research demonstrates the role that new discoveries will have in changing the nature of oral health care in the future—in particular, how the processes of tissue inflammation and destruction can be better understood and eventually controlled.

For his outstanding research achievement, Dr. Overall has been awarded a Tier 1 Canada Research Chair, one of two awarded to the Faculty of Dentistry and one of the highest distinctions a scientist can receive.

The article about Dr. David Sweet’s extremely important community service activities in the BOLD lab demonstrates how his unique forensic odontology expertise is crucial throughout the world. Dr. Sweet’s international accomplishments were recently recognized when he was appointed an Officer of the Order of Canada—a first for a member of our Faculty.

Drs. Gardner, Overall and Sweet are just three of the outstanding faculty members who are contributing to the eminence of the Faculty of Dentistry. Each issue of Impressions will bring you more stories of the contributions our faculty are making to the achievement of our strategic priorities.

I hope you enjoy our new publication. It has been exciting to develop a new medium that communicates the outstanding achievements that occur in our Faculty. We welcome any feedback you might have about this publication and any interest you may have to participate in the activities you read about.

All the best,

Charles Shuler, DMD, PhD
Dean and Professor, Faculty of Dentistry
**New Specialty Graduate Program in Endodontics**

Approved in May 2008 by the UBC Faculty Senate, the new UBC Dentistry three-year specialty graduate program in endodontics enrolled three residents this September. The residents all have international backgrounds, with solid experience in teaching, research and clinical activities.

“Advanced endodontic training requires dedicated specialist teachers and specialized equipment, instruments and materials,” remarks Dr. Markku Haapasalo, professor of Endodontics. Previously, BC and Western Canadian dentists had to go to Toronto or the United States for safe and effective higher-level training in endodontics.

Along with Haapasalo, Dr. Jeff Coil, assistant professor of Endodontics, and Dr. Ya Shen, clinical assistant professor, have developed an ambitious program that is attracting industry interest, the characteristics and performance of new nickel-titanium rotary instruments.

Haapasalo is excited to have the support of the British Columbia Society of Endodontists. He hopes UBC Dentistry’s new graduate program will not only train advanced endodontic specialists able to treat and save teeth with challenging endodontic problems, but will also contribute to a vibrant community of endodontists in BC and internationally.

The graduate endodontic clinic at UBC Dentistry will be accepting referrals to endodontic treatment from BC dentists.

**New Program for the Medically Complex Patient at VGH—A New Opportunity for UBC Dental Residents**

UBC Dentistry general practice dental residents are now able to expand their experience in the newly established Oral Care Program for the Medically Complex Patient (OCMP) in the Dentistry Department at Vancouver General Hospital (VGH). Medically complex conditions include unstable cardiovascular hematomatological diseases, pericancer treatment states and organ failure, commonly of the kidneys or liver. The OCMP provides needed alternative outpatient oral care/dental service for these patients, as commonly dental facilities might be less adequately equipped to provide a safe and efficient patient care environment.

“UBC Dentistry dental residents will now have exposure to a much wider patient population through this program at VGH,” remarks Dr. Christopher Zed, head of VGH Dentistry Department and associate dean of UBC Dentistry.

VGH’s specialized oral care program consists of dental hospital residents and certified dental assistants with institutional dentistry experience. Dr. Samson Ng, program director, a certified specialist in oral medicine and oral pathology, and clinical assistant professor at UBC Dentistry, explains: “The unique feature of this program is the integration of medical sciences and dental technology to optimize care for patients with medical concerns.”

Samson adds, “In addition to the oral care program, general dentistry service is also provided to the public through a dentistry team coordinated by Drs. Rennes Duprat, Asif Tejani and Sara Bishara Bisha.”

For further information and referral, contact Dr. Samson Ng at the VGH Dentistry Department (604) 875-4006.

UBC DENTISTRY IMPRESSIONS

**BOLD Lab Helps Develop an Innocence Project at UBC**

For the past few years, Dr. David Sweet, director of the Bureau of Legal Dentistry (BOLD) lab, and Dr. Iain Pretby have been working a high-profile crime case in the United States with Peter Neufeld and Vanessa Potkin of the Innocence Project in New York and Dr. David Senn of the University of Texas at San Antonio. The case involves the conviction of a Mississippi man on what they believe is flawed forensic bite mark evidence. The Innocence Project reports that a new person has been arrested and has admitted to the crimes. (Visit innocencelabproject.org for up-to-date information.) Work for the Innocence Project is completed by consulting experts without charge.

Sweet and the BOLD lab is also involved in a similar death penalty case in Seattle through Innocence Project Northwest.

Closer to home, the Faculty of Law at UBC is in the process of establishing an Innocence Project of its own and is encouraging students to get involved with reviewing cases. Sweet gave his first talk at the Faculty of Law, introducing law students and faculty to issues in forensic odontology. These include identification of the victims of crime through dental records and, more significantly, the study and analysis of bite marks on human skin when teeth are used as a weapon in violent crimes.

Sweet will bring in other Innocence Project case information as examples for UBC. In the future, however, Sweet believes that the Faculty of Law’s own Innocence Project will be working more on actual cases, as well as the background information he provides.

Sweet’s experience in gathering evidence in court will also prove invaluable, because there is wide interest in how to make evidence presented by expert witnesses effective and understandable.

**Clinic Hours Adjust for Dental Hygiene Students**

Evening and weekend clinic hours have been scheduled for the Nobel Biocare Oral Health Centre to increase flexibility for both patients and Dental Hygiene degree students. “The goal is to be of service to families and individuals who work or attend school on week days,” says professor Bonnie Craig, director of the Dental Hygiene Degree Program at UBC Dentistry.

While the hope is that these new times will appeal to people who may not currently access oral health care, the other important benefit is for the dental hygiene student. By opening the clinic in the evening and on the weekend, a broader patient population will be available to the students. “We want students to develop increased social responsibility and a commitment to community service, and to do so they need to experience a diverse patient population,” Craig says.

“One way to achieve this is by reaching out to address some of the unmet needs of the community—those whose life circumstances may prevent them from coming during regular business hours.”

Clinic sessions for Dental Hygiene degree students will be held Tuesday and Thursday evenings and Saturday mornings.

**BOLD Lab Milestone: 800 and Counting**

The director of the Bureau of Legal Dentistry (BOLD) lab, Dr. David Sweet, reports that its case numbering system reached 800 when a new case arrived from Whitehorse, Yukon Territories, earlier this year. This signified the 800th forensic case that the lab had completed since its inception in 1997. “This is an average of 80 cases per year, a tremendous workload for the BOLD lab staff,” remarks Sweet.
Clinical assistant professor Dr. Mark Fogelman generously provided a CEREC 3D system to UBC Dentistry for three years. This will enable the faculty to develop expertise in using CAD/CAM approaches in patient care. “We support the future of the profession and recognize that access to this kind of technology may be lagging in schools,” says Gary Doonahed, a branch manager with Patterson Dental/Dentaire. Andrea Wink, director of development at UBC Dentistry, sees this as an excellent example of how manufacturers, suppliers and educators can work in partnership.

Dean Charles Shuler has recognized that these new technologies will play a major role in the future of oral health care. “The past 40 years have seen a very rapid rate of change in the way oral health care is delivered and there is every expectation that dentistry will continue to change at a rapid rate,” he says. Shuler asserts that it is important to dental students that the most recent advances in dentistry are available to them while they are in school. “It is important to ensure that our new graduates are familiar with these new technologies, so that they have the competencies necessary to enter general dental practice.”

Clinical assistant professor Dr. Mark Fogelman is taking the lead in developing faculty expertise with the CEREC 3D-CAD/CAM technology and optimizing its introduction to dental students. Fogelman and several other members of the Divisions of Operative Dentistry and General Dentistry will spend this fall term gaining a thorough understanding of the CEREC technology for patient care. This encompasses treatment planning, appropriate design and achievement of tooth preparation, capturing tooth preparation with an optical impression acquisition unit, design of the restoration using the computer-aided design (CAD) software, production of a restoration using the computer-aided manufacture (CAM) software (combined with the precision milling chamber), and final bonded cementation procedures. CEREC 3D technology enhances fundamental operative dentistry and, in particular, enables preservation of the periodontium and conservation of tooth structure while providing an esthetic, tooth-coloured restoration.

“Breaking down the technological process and achieving expertise in its use are the first steps,” Fogelman says. “The next step will be to integrate it into the existing dental curriculum so students are exposed to this technology during their dental education and are better prepared for their future careers.” From an academic perspective, Fogelman is interested in the research behind adhesive dentistry. “Our approach to its implementation in both the curriculum and clinic is based on a solid understanding of traditional restorative techniques and the possibilities for future groundbreaking procedures,” he says.

Once the CEREC 3D technology is well established at UBC Dentistry, the expertise gained will be shared with the alumni and the dental professional community through hands-on continuing education. The CAD/CAM technology can change the roles of all the members of a dental practice team. “The CEREC 3D system is an example of ways that UBC Dentistry is progressing,” Shuler says, “to ensure that our curriculum and the experience of our students are at the cutting edge of the profession.”

Clinical Radiology Paper Still Popular

Associate professor and chair of Oral & Maxillofacial Radiology, Dr. David MacDonald, has a hit. His paper “Fibro-osseous Lesions of the Jaws,” first published in Clinical Radiology, was the third most downloaded paper for 2004 and 2005, and it continues its legacy as one of the 25 currently most downloaded articles from ScienceDirect (www.sciencedirect.com).

Onward to 2010

With the Beijing 2008 Olympic Games barely past, already the Vancouver 2010 Olympic and Paralympic Games loom on our horizon. The Vancouver Organizing Committee (VANOC) for the 2010 Winter Games manages all Olympics volunteers. While VANOC collected names of volunteers through their central website, Dr. Christopher Zed, associate dean of UBC Dentistry, and Dr. Mark Parhar were busy motivating prospective dental volunteers. “Now that VANOC’s central volunteer sign-up is closed, we will be receiving their list of potential dental volunteers for the 30 to 40 volunteers needed,” Zed says.

Guided by lessons learned from Beijing 2008 and from the International Olympic Committee, Zed and his group will focus next on developing the dental treatment protocols and the physical plans (layout, equipment and suppliers) for the two polyclinics. Zed anticipates that the polyclinics, located in the Vancouver and Whistler Villages, will be ready early in 2010, well in advance of the February 12 opening of the Games. The volunteer team, once selected, will be assembled some time in late fall 2008.

Visit dentistry.ubc.ca for updates.

Dental Hygiene Research Team Wins Prestigious Grant

Clinical assistant professor Pauline Imai and clinical module coordinator and instructor Penny Hatzimanolakis have been awarded the prestigious Canadian Foundation for Dental Hygiene Research and Education (CFDHRE) grant for 2008. The $12,060 grant will be used to conduct a clinical trial comparing the abilities of an interdental brush and dental floss to reduce plaque and bleeding in patients with intact papillae. “What we are looking for is to determine whether the Curaprox interdental brush is an effective, easy-to-use alternative to dental floss,” Imai says.

The CFDHRE credited this project as being very innovative, with a high level of importance to the dental hygiene profession. The CFDHRE funds dental hygiene research and education in order to enhance the oral health and well-being of Canadians.

FACULTY AWARDS AND RECOGNITION IN 2008

RECIPIENT
Dr. Edwin Yen, Professor, College of Dental/Surgery of British Columbia
Dr. Christopher Zed, Clinical Associate Professor and Associate Dean
Dr. Marcia A. Boyd, Professor Emeritus
Dr. David Sweet D.C., Professor
Dr. Christopher Clark, Professor

AWARD/RECOGNITION
Honorary Member Award, College of Dental/Surgery of British Columbia
Award of Merit, College of Dental/Surgery of British Columbia
Distinguished Service Award, British Columbia Dental Association; William J. Dies Award for Outstanding Achievement, ADA/Allies Foundation
Honorary Membership Award, British Columbia Dental Association; Officer of the Order of Canada
3M-ESPE National Dental Teaching Award, American Dental Education Association
Most people know Dr. David Sweet, founder and director of UBC’s Bureau of Legal Dentistry (BOLD) Lab, by his impressive list of “firsts” in DNA recovery methods and forensic odontology standards. But the last act of patient care—the respectful and compassionate treatment of the dead while gathering forensic evidence—defines the heart of this warm, empathic dentist beyond his world-class achievements.

Whether he’s in the morgue, attempting to match a bite mark on a murder victim to a suspect or taking dental data from an unidentified body following Thailand’s 2005 tsunami, Sweet characterizes himself as a truth seeker who brings a glimpse of humanity to the last moment of a person’s life. “When a woman is raped and murdered, they [killers] have tried to erase her and dispose of her,” says the tanned, trim scientist seated at a table in his office. “We’re giving back her identity.”

One morning in Thailand, before his workday began, Sweet attended the cremation for a Canadian victim of the tsunami. As Buddhist monks made preparations, he and other Canadian team members placed papier mâché flowers on the body, a symbolic goodbye gesture honouring the man’s soul. Sweet later burned a CD of music to play as the man’s ashes were scattered at sea, a ritual requested by the victim’s family.

With such a tradition of respect, Sweet recalls his shock and disappointment when he saw a junior colleague leave bits of alginate (dental mold material) on the chin and inside the mouth of a victim in the morgue. “Because she was deceased, it didn’t matter to him,” he said. In response, Sweet gently cleaned the woman’s lips with a plush towel and removed bits of alginate from her mouth. His colleague asked: “What are you doing?” Sweet replied: “She’s my patient. I’m caring for her. This

THE LAST ACT

Dr. Sweet

BY HEATHER CONN
is someone’s daughter.” He says that as a result of this experience, his colleague now demonstrates esteem for all victims he attends. Such an approach conveys “the compassion of dentistry,” in Sweet’s view.

A recent appointee to the Order of Canada, Sweet brings a passionate sense of service to his teaching, research and casework, which keeps him at the BOLD lab for ten-hour days. That’s when he’s not acting as chief detective in a BC murder case, drawing on a technique he’s developed as a PhD forensic scientist in disaster victim identification for INTERPOL, the International Criminal Police Organization; speaking at international conferences, consulting for the RCMP and police agencies in Canada and abroad; providing key expert testimony in criminal cases such as British Columbia’s Robert Pickton murder trial; training law enforcement officers, lawyers and judges; and promoting his lab to potential fundraisers.

“The analogy we think of is ‘shaking hands and kissing babies,’” he says of his attempts to gain secure, ongoing funding for the BOLD lab from government agencies or corporate donors. “I’ve spent more time promoting the lab than putting my belly at the bench where more discoveries can be made.” The UBC tenured professor adds ruefully: “Research has had to go by the wayside. We’re still doing it, but not as full-fledged as it should be.”

In 1992, Sweet was the first person in the world to successfully conduct DNA analysis on incriminating teeth. Three years later, he made a landmark discovery, proving that you could analyze DNA from bite marks on a submerged victim. His method provided crucial evidence in a BC murder case, drawing on a technique for retrieving saliva from bite marks that Sweet had developed as a PhD forensic student in Spain. Over three decades, he has received the university’s Faculty of Dentistry award for meritorious service eight times, an unparalleled feat.

In 1996, Sweet started the university’s innovative BOLD lab, drawing a half-million-dollar start-up grant from the provincial government. His groundbreaking expertise and vision, later augmented by BOLD’s technology and equipment, has enabled him to pioneer techniques that have become global industry standards in forensic odontology:

- Enhanced DNA recovery – development of the “double-swab” technique, a more precise advance in matching suspects to bite marks on victims, using genomic DNA from salivary stains and now applied to other evidence such as fired shell casings from guns;
- Improved bite mark tracking – creation of a computer-assisted teeth-to-bite mark technique to make visual bite mark comparisons;
- Cryogenic grinding – this revolutionary method, which extracts DNA from hard tissues from skeletal remains, allows forensic investigators to revise old and “cold” cases to access DNA that was previously unrecoverable;
- Leading disaster response – founding of the BC Forensic Odontology Response Team (BC-FORT), Canada’s best-trained group of dental responders capable of handling a mass disaster in this country or on behalf of Canadians who die in other nations. Sweet says: “In Thailand (tsunami response), BC-FORT members were put in leadership positions because their skills and work were head and shoulders above what others were doing.”

“There are no other labs in the world like this,” Sweet says. “We’re breaking new ground. We have the potential to make a lot more discoveries.”

With popular television shows like CSI and Cold Case Files (the BOLD lab appeared in a “Stanley Park Skulls” episode), forensic science has garnered high-profile attention, accessible to millions worldwide. Dubbed the “dental detective” by Global National Television, Sweet has appeared on CBC Television, the Discovery and Learning Channels, and other media programs in response to heightened public interest about BOLD’s casework. Observers might well assume, therefore, that Sweet’s world-leading lab attracts ready support from those who fund cutting-edge research. However, he cites numerous examples where powerful decision-makers have expressed admiration and excitement over the lab’s successes, but have provided no financial backing.

Currently, the BOLD lab requires at least $150,000 a year to stay afloat; it maintains a staff of six, besides Sweet, including a professor emeritus and an international consultant. Other than small donations from dentists, BOLD’s survival depends completely on fee-for-service casework, a business model introduced by Sweet. He jokes that his grey hair belies his frustration over having to do criminal casework almost exclusively just to “pay the rent,” rather than conducting pivotal research.

“It’s an odd irony,” Sweet admits. “The Canadian government doesn’t support us, but we certainly support the government and justice system. We do great things for society!” He easily describes his ideal working scenario: to receive annual income from an endowment or ongoing contracts that provide $150,000 to $200,000 a year. He would maintain an autonomous and “independent centre of excellence” that combines teaching, research and some casework.

To ensure BOLD’s future, why doesn’t he seek out grants like other researchers do? He tried, only to discover that traditional science does not fund death-related studies and related forensic research. Canada has no national institute of justice, as in the US, that supports such work. Since his area of focus does not fall under basic science or medical research in any traditional sense, the typical funding agency will not consider it.

Hence, Sweet is concerned about succession planning and a future legacy for grad students. A 1978 UBC Dentistry graduate himself, he has had to cancel his grad student program due to this lack of funding, while interested candidates continue to phone and e-mail him regularly regarding admissions. “We’re supposed to be passing the baton so that people can break new ground,” he laments.

Yet Sweet is excited about the potential of new technology that will soon be available at BOLD, which will allow successful recovery of ever-tinier amounts of DNA following destruction of evidence by criminals or through natural processes. To unwind from work demands, Sweet turns wood on a lathe. His career and daily hobby share parallels: both require intense focus, allowing him pleasure and satisfaction in exposing something hidden. He gives away or donates the large bowls and platters he makes, from wood such as sask chalk maple and mespilus, to colleagues and coworkers or to various charity organizations. In his career and recreation, he always gives back: “That’s really important for me.”

The BOLD lab is under the aegis of UBC Dentistry. For more information about supporting the BOLD lab, contact Andrea Wark, Director of Development, at 604-822-6808.
Christopher Overall likes to climb mountains, cycle across continents and tackle large, complex problems. As a student in dental surgery in Australia, he remembers the day when he decided to go into research. “It was a beautiful sunny May day, autumn in Australia, about 4:00 in the afternoon and I was in the microbiology and immunology lab,” Overall recalls. “My professor came up and asked me what I was going to do with my life. When I told him I was going to become a dentist, he said, ‘No, you are going to become a scientist.’” Overall became both.

While at the University of Toronto, Overall was mentored by professor and mentor Jaro Sordek. In 1989, Overall came to UBC to do post-doctoral studies with future Nobel laureate Michael Smith. “I was keenly interested in his research on site-directed mutagenesis, or reprogramming segments of DNA—and I thought he would win the Nobel Prize.”

Today, as CRC chair in Metalloproteinase Proteomics and Systems Biology, Overall is at the forefront of his research field. He teaches in the Department of Oral Biological and Medical Sciences in the Faculty of Dentistry, and supervises periodontics and general dentistry one day a week in the Faculty of Dentistry Specialty Clinic as part of his teaching commitment to the residency program. He is also a member of the Canadian Proteomics Network, The Canadian Arthritis Network of Centres of Excellence, the UBC Centre for Blood Research, and the UBC Prostate Centre.

“In Australia, I really enjoyed the hands-on preventative dentistry, but I also wanted to do the science. Now I realize that to do both requires 150 percent of your time.”

**Periodontology Research—Finding the Key to Immune Response**

Periodontology, or the study of the gums (gingiva), alveolar bone and ligaments that support the teeth, is a primary branch of preventative dentistry. While plaque and bacteria build-up on the teeth and gums can lead to periodontal disease, multiple causes have been identified. Overall’s research examines what happens at the molecular level, specifically at the level of the proteome (see text box below).

Until recently, it was commonly believed that a group of enzymes called matrix metalloproteinases (MMPs) were responsible for periodontitis by mainly degrading the extracellular matrix, or collagen, in the gingiva, bone and ligaments that hold teeth in place. Overall wanted to identify other functions of these enzymes. He and his lab separated all the genes in the connective tissue in human gingiva by using gingival fibroblasts (cells that provide a structural framework for many tissues) as the source of the DNA. They were able to place these genes into the DNA of yeast cells and use a technique called a yeast two-hybrid screen, which can identify proteins that will bind with a segment of MMP enzyme used as the bait. They discovered a protein called MCP-3 that acts like a molecular beacon or a green traffic light capable of

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**OVERALL LAB SYSTEMS BIOLOGY PRIMER**

Proteins are the building blocks of all living organisms. They comprise the main components of the physiological and metabolic pathways of cells. While genes provide the code, or instructions for constructing proteins such as enzymes and antibodies, the proteins themselves do the work. Every biological process in every living organism involves a complex cascade of interactions between proteins.

Proteomics is the large-scale study of the structure, function and interaction of proteins.

Proteome is the collection of all proteins in the body of an organism. It is estimated that there are 250,000 to 300,000 proteins in humans and fewer than half have been catalogued and only about 10,000 fully characterized.

Proteases are enzymes that begin the process of breaking down proteins. They are the largest enzyme family in humans.

Metalloproteinases are the largest subset of proteases. They function as the major recognition switches, and produce irreversible actions on every protein in the proteome during cell synthesis, malfunction, functional activation, modulation, and signalling.
directing white blood cells— or leukocytes—to the site of injury or bacterial infection such as gingivitis or periodontitis. In the process, they found that instead of just chewing up and destroying the collagen matrix, the MMP enzymes were also cutting the MCP-3 protein, biting off the first four amino acids in a ‘seismic shift’ in the understanding of inflammation, “Overall explains. “Think of the connection between all of these proteins, enzymes and their inhibitors as a spider’s web. If one section of the web changes—due to a sudden insult of bacteria, injury, or diseases like cancer and arthritis—it has ripple effects on the entire web,” Overall explains. “There are about 569 proteases and 200 inhibitors in humans, and we are mapping out all of the interactions of proteases with each other and with all the substrates they are touching,” he says.

The Overall Lab has developed several novel technologies for their degradomics research, leading to surprising and vital discoveries, such as how HIV infection can lead to dementia. In one approach, Overall’s team developed the CLIP-CHIP®, a DNA microarray chip that has every protease, inhibitor and gene variants on the chip for both mouse and man. The CLIP-CHIP® is the only complete, dedicated protease chip that is distributed freely around the world—and it is the first registered trademark of UBC. “Using nearly 180 CLIP-CHIPs we have profiled 23 human tissues and we are now looking at different disease states, such as HIV, cancer, periodontitis and arthritis,” Overall says. “This work wouldn’t have been possible without Ross MacGillivray, director for the Centre for Blood Research at UBC. He was instrumental in bringing dentistry into the centre, and providing fantastic lab space in the collaborative environment of the Life Sciences Centre.”

The next step is drug discovery. “This type of research is really important because we can link basic discoveries and mechanisms back to different disease states, and that allows us to identify drug targets,” he says. As a clinician, researcher and consultant to pharmaceutical companies like British Biotech and Novartis, Overall’s research vision and experience is definitely multidimensional—much like the protease webs he studies.

“To me, this is the best life, because every day is different, and it is wonderful to be involved in worldwide, collaborative research that can have such a wide-ranging effect—in dentistry and in overall health and wellness.”

“As my career has demonstrated, by starting off in dentistry with a clinical and medical background, and then moving into research, you have a better idea of the important questions that need to be addressed.” – UBC Dentistry Professor Christopher Overall
The First Step – Blogging at UBC Dentistry

As the demand for more trained professionals increases and as more students train abroad to receive their dental degrees and return home to practise, UBC Dentistry recognizes the need to establish a global standard in dental care to bridge international training gaps.

"We want to increase the understanding of various approaches to dental treatment in different parts of the world and why this impacts on professional recognition between countries," says Dr. Karen Gardner, clinical assistant professor at UBC Dentistry. In an initial effort to establish this global standard, UBC Dentistry is first in the world to offer its students a global learning experience with the launch of the International Peer Review (IPR) teaching initiative. This teaching collaboration with four other universities from around the world uses a blog format.

UBC Dentistry’s newly launched IPR in blog format invites dentistry students from UBC, the University of Saskatchewan, the University of Hong Kong, National University of Singapore, The University of Queensland, University of Melbourne in Australia, University of California, San Francisco, the University of New South Wales, the University of Birmingham in the UK, and the University of California, Los Angeles to share notes of interest dentistry students from the different universities. The paired students write an introductory letter describing their work. They invite each other to view pictures and post comments about the techniques used at their institution. They also provide feedback to each other based on skills taught at their home university.

IPR in blog format allows dental students to recognize differences in dental treatment and to defend their conclusions in an evidence-based format. Students gain confidence in their education and become aware of different approaches to the same problems as well as the rationale behind these approaches. Students also learn to appreciate why a procedure may be done differently in another country.

Gardner adds that IPR will also help Canadian dental students who train abroad understand where differences in their training may occur and why gap training of up to two years may be required to fulfill the practice standards of another country.

"As dental professionals work more globally, an international standard in dental education needs to be established as a baseline to understand and measure education and qualifications," says Gardner. “This model shares practices. The hope is that as it continues to grow, eventually there will be convergence, which will lead towards standards in care across the globe.”

With the success of its blogging format, UBC Dentistry’s IPR project is poised to go further.

The Next Steps – On Course with International Peer Review

The International Peer Review (IPR) project at UBC Dentistry provides solid ground for students to engage in international dialogue online in blog format and to participate in international continuing dental education. What, then, are the next steps towards global standards in dental care? With the success of its blogging format, UBC Dentistry’s IPR project is poised to go further.

Dr. Karen Gardner, clinical assistant professor, has secured funding from Universitas 21 ($221), an international network of 21 leading research-intensive universities in thirteen countries, to take the IPR project into their participating faculties and schools of dentistry. The University of Queensland, University of Hong Kong, National University of Singapore, and the University of New South Wales have committed to integrating the project into their dentistry curricula. And already, dentistry faculties and schools outside the U21 consortium have expressed a wish to be included.

The U21 grant also provides funding to construct Diastemas—a web-based platform modelled on the hugely successful online community TakingITGlobal.org. Attracting the attention of media and industry that supports the interests of young adults, TakingITGlobal connects youth to find inspiration, access information, get involved, and take action on issues in their local and global communities. This highly interactive, well-developed, financially sustainable model of a global online platform is the IPR project’s vision for Diastemas, its future online site.

Once launched, dental students around the world will login and begin connecting, by publishing work and communicating about learning issues encountered in their dental education. As peer-to-peer interaction expands, the platform can quickly adapt online tools sets to meet the demand for new and cutting-edge ways of e-learning exchanges.

The enthusiasm of dental students at UBC Dentistry has broken into full gallop. Currently, sixty-third-year and twelve-fourth-year dental students are now participating. They recognize themselves as leading the world in this international endeavour and are getting involved in the site’s development in anticipation of learning with students and practising dental populations worldwide.

Through powerful online tools, this e-learning exchange has the potential to run deep global tracks among students, and between students and practitioners. Students are eager to share its value and ease of use, and it has rich prospects for fostering lifelong learning and mentorship in clinical dentistry.

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Dental Hygiene Graduate Reflects on the Online Experience

The appeal of learning outside a traditional academic setting is gaining ground. Blogs, e-learning exchanges, online courses and examinations delivered by WebCT, and study groups are becoming very popular among dental professionals, whether completing their education at university or after graduation through continuing dental education. These days, at any point along one’s career timeline, learning is certain to be experienced online.

At UBC Dentistry, all the Dental Hygiene Degree Program completion courses are online. A recent videotaping of interviews with dental hygiene graduates revealed some interesting insights about their online learning experiences. Here is what one graduate said:

UBC Dentistry: How did you learn to manage your time, with your courses, personal and practice life?
Simone: Time management for the courses did require planning and organization. I found the flexibility of online courses was very encouraging. I also found my colleagues also studying in the program to be very encouraging as well. I was studying as a new mom—with a newborn at home. Certainly that did create some challenges, but it did encourage me to be organized with my time and not to delay in getting my studies done . . . It was very doable, but again, it did require a lot of focus, commitment and dedication.

UBC Dentistry: How did you make the transition from a traditional classroom setting to an online learning environment?
Simone: I found the transition was easy. But again, I was motivated. I wanted to finish my degree. It might have created a bit of a challenge if I hadn’t been motivated to finish. I also found being committed to my group members really encouraged me to stay on track.

UBC Dentistry: What resources provided did you find helpful?
Simone: The encouragement and feedback from the instructors . . . There’s a wonderful online resource through the library—the librarian was wonderful . . . The colleagues within my program were very helpful as well . . . The big thing was the quick feedback. I got feedback from the instructors quicker than in a traditional setting actually, and that’s the beauty of online studies.

UBC Dentistry: What was your experience with group work?
Simone: For the most part good. How I used to approach group work was that I would pretend I was the only person doing the assignment. That would be my contribution, and hopefully the other group members would follow suit. I learnt so much from other people’s ideas. So it was not only my ideas that were contributed, but it was everyone else’s and just from that I learnt a lot. I also found that, in the courses, there was a lot of opportunity for peer feedback for our assignments and I found that just incredibly helpful. I don’t think there’s any way I could have done as well as I did if it hadn’t been for the peer feedback.

UBC Dentistry: How did you find the Dental Hygiene Degree Program in general?
Simone: It is third- and fourth-year university studies, which require commitment, dedication and hard work. What I liked most about the program was the opportunity for group work, for learning so much from my colleagues in my class. I appreciated their encouragement—their feedback . . . I appreciated the opportunity to give them feedback, and I really appreciated the encouragement from the instructors.

UBC Dentistry: What provides did you find helpful?
Simone: The encouragement and feedback from the instructors. I appreciated the opportunity to give them feedback as well as I did if it hadn’t been for the peer feedback.

Simone: Time management for the courses did require planning and organization. I found the flexibility of online courses was very encouraging. I also found my colleagues also studying in the program to be very encouraging as well. I was studying as a new mom—with a newborn at home. Certainly that did create some challenges, but it did encourage me to be organized with my time and not to delay in getting my studies done . . . It was very doable, but again, it did require a lot of focus, commitment and dedication.

UBC Dentistry: How did you learn to manage your time, with your courses, personal and practice life?
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On Sunday, May 18, 2008, Delta’s Sungod Arena burst alive with colour and music as women and children of Punjabi heritage came together to celebrate. UBC Dentistry was an honoured guest among the 3,000+ attendees, community booths and information tables. Organized by the non-profit organization Trinjan—The Punjabi Folk, the Festival of Mothers and Daughters, Mela Mawan Dhyian Da, is an annual event that showcases cultural performances and, more recently, includes a women’s health fair.

“Trinjan wanted UBC to participate in their health fair and our dean, Charles Shuler, quickly seized the opportunity as a chance for dental students to break out of their regular learning environment and experience an unfamiliar setting.”

Rossoff quickly understood that UBC Dentistry could play a unique role, beyond handing out oral health information. After getting a feel for what the community and the festival organizers wanted, Rossoff determined that this health fair was an ideal venue for providing oral health screenings to a population segment that may not be accessing dental care and was not readily available to students.

Trinjan was excited to have UBC Dentistry take part in their health fair and took advantage of the language skills of dental student volunteers Kamaldeep Panag and Ramitpal Singh Khurana, then both fourth-year students. Panag and Khurana, together with Rossoff, spent the month preceding the event appearing on Punjabi-language radio and television shows, introducing themselves and the parameters of the service they would provide.

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Three students (Harjinder Kang, currently a dental student; Kamaldeep Panag, DMD 2008; and fourth-year DMD student Panag, who then works with the Dental Students Association, DST) volunteered to work with UBC Faculty of Dentistry students to provide free oral health screenings to those in need. The event was called the 2008 UBC Dental Fair, held at the University of British Columbia’s Robson Square campus.

The idea for the dental fair came from Dr. Shyamal Trinjan, the UBC Dental program’s clinical coordinator. Dr. Trinjan and the PACS coordinators are eager to mobilize students earlier in their education to take students to non-traditional settings. This is uncharted waters. Trinjan’s dental student is extraordinary, says Rossoff, fourth-year DMD student Panag, who identifies an undiagnosed pathology.

Many parents came with concerns about the development of their young children’s teeth, and of the women who came for oral health screenings, most were over 50 years of age. The participants ranged in age from two years to 78, according to Rossoff. Over 70 percent of the more than 100 oral health screenings performed daily led to visually identifiable referrals for patients to follow up with a dentist. The most significant case involved then fourth-year DMD student Panag, who identified an undiagnosed pathology.

“Victor and a native Vancouverite, has volunteered for community programs, conferences and dental health fairs since he was sixteen. He first volunteered for Medical Aid for Vietnam in 2005, when he was inspired by the Doctor, Patient and Society (DPAS) program—a precursor of UBC Dentistry’s Professionalism and Community Service (PACS) program—to look into the community responsibility aspect of his future profession. Through DPAS and his other dental courses, he became aware of the oral health disparities affecting those in poverty. Up until Vietnam, he had never seen the kind of poverty he saw in its villages. “Throughout my experience, I did not examine even one healthy mouth of teeth. And I have never seen such destruction and decay (in the villages)—it compares to the chaos of a war zone. Ramparipr Kheaw was among the many children that lived in poverty. And I was able to help relieve these people of oral pain that for some has lasted for years,” he says.

The following day, he watched helplessly as unserved people were turned away from the fair. Sometimes, when he plugged in a tooth with a pliers, parts of the tooth crumbled away because the people in the area were rarely given a crown. Other times, what crumbled was actually a cake of calculus that had built up from years of poor oral hygiene. Victor knows the people are not to be blamed for their plight. They have had no one to teach them proper oral hygiene and no money to afford a dentist, even if there had been one readily available.

Medical Aid for Vietnam, with its 15 years of experience, is highly proficient at setting up everything in advance, including notifying the villagers and reserving space for a temporary clinic. Not everyone can be treated, however, as the need is great in the many villages. The lines never disappear at the end of the day. The never-ending lines brought sorrow and burden to Victor’s heart. As time ran out each day, he watched helplessly as unserved people were dismissed.

“I pushed myself to be better, to be more efficient and to be more adept,” he says. Looking back, Victor knows he developed better skills and managed to increase the number of patients served from 15 to 40 per day.

Still, he knows the lines never cease. And, he says, more help is needed. “I know I have to return.”

(Photograph above, from left to right, Victor Law, a fourth-year DMD student, and Dr. Lawrence Rossoff, UBC Dental program’s clinical coordinator, were among the volunteers involved in the fair.)
Student awards recognize scholastic achievement and the core values of the oral health professional. The Thompson Okanagan Dental Society Executive recently voted unanimously to double their current award in support of an undergraduate dental student. Their award recognizes and rewards a student with high academic standing, strong leadership, and an excellent attitude.

By supporting an existing student award or bursary you will help enhance a student’s experience by lessening financial constraints and acknowledging professionalism, respect and charisma in all future oral health professionals.

To support existing student awards and bursaries or create a new one of your own, please contact Jane Merling at 604-822-5886 (merling@interchange.ubc.ca).

In Memory of Dr. George Ng

UBC Dentistry mourns the loss of one of its greatest friends, Dr. George Ng, who died unexpectedly in July of this year. He was a passionate man, committed to the oral health profession and to his family. One could not help but be drawn in by his charismatic charm and infectious smile.

Born in Hong Kong in 1937, George immigrated to Canada in 1965. He obtained his DDS and MSc degrees and a diploma in Pedodontics from the University of Toronto, and soon after graduation made his way to Vancouver, where he met Karen, his wife of 39 years. His support for UBC Dentistry began at the time of dean emeritus, Dr. S. Wah Leung.

Drs. George Ng and S. Wah Leung were the founding members of the Chinese Canadian Dental Society in BC. George was the society’s first president. He pioneered promoting dental health education to the Chinese community and was a regular speaker in the local media.

George had an unbridled enthusiasm for philanthropy. The great spirit of generosity that George and his family have shared with UBC Dentistry was underscored recently when the Ng family “adopted” an open operatory in the Nobel Biocare Oral Health Centre.

In addition to receiving several professional accolades for his community involvement, including the Canada Volunteer Award Certificate of Merit, George was awarded a Fellowship in the American College of Dentists and the Certificate of Merit from the College of Dental Surgeons of BC. As an active community leader, George believed that it was part of his “social responsibility to give back to the community and support the future of dental professionals.” A champion for the prevention of early childhood caries, George’s interests also included research and publishing articles in dental journals.

George was proud to see his daughter Vania, son-in-law Chris and son Carter follow in his footsteps to become dental professionals. Now, with the arrival of his grandson Calvin, the family legacy in dentistry is sure to continue through generations.

In George’s memory, the Ng family created the Dr. George C. Ng Endowment Fund to continue George’s generosity and dedication to the oral health profession.

UBC Dentistry will miss George Ng.
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

1970s
Announced on July 1, 2008, Dr. David Sweet had their 30th reunion at the Pan Pacific Hotel following a reception given by the UBC Dental Alumni Association. Almost 50 people joined in to celebrate the event. The warm hugs, big smiles and friendly laughter started in earnest at the class photo session. It was very heartwarming to experience the camaraderie among our classmates, spouses and faculty members.

David Sweet
DMD 1978

On March 7, 2008, the UBC Dentistry Class of 1978 had their 30th reunion at the Pan Pacific Hotel following a reception given by the UBC Dental Alumni Association. Almost 50 people joined in to celebrate the event. The warm hugs, big smiles and friendly laughter started in earnest at the class photo session. It was very heartwarming to experience the camaraderie among our classmates, spouses and faculty members.

On March 7, 2008, the UBC Dentistry Class of 1978 had their 30th reunion at the Pan Pacific Hotel following a reception given by the UBC Dental Alumni Association. Almost 50 people joined in to celebrate the event. The warm hugs, big smiles and friendly laughter started in earnest at the class photo session. It was very heartwarming to experience the camaraderie among our classmates, spouses and faculty members.

1980s
Wayne Peace
DMD 1973
Wayne Peace and fellow DMD 1973 classmates celebrated their 35th reunion on September 5-7, 2008 at the Aerie Resort & Spa, Malahat, Victoria, B.C.

DMD 1974 REUNION
35th Year Reunion · Summer 2009
Contact David Na DMD 1974 at daining@tusks.net or Jenn Parsons at dentalum@interchange.ubc.ca for details.

1990s
Michelle Chang
DMD 1998
DMD 1998 celebrated their ten-year graduation anniversary with a reunion during the Pacific Dental Conference in Vancouver last March. We had an amazing turnout—31 out of our 39 graduates.

The reunion brought classmaters out from the Lower Mainland, Victoria, Nanaimo, Revelstoke, Kamloops, Port St. John, Calgary, and even Mexico. Having left about 23 children behind at home, we met up at the UBC Alumni Reception, where we had our class photo taken and impressed some other classes with our turnout. Our class was always a close-knit group. Even with the challenges of distance, family life and grad school, we still seem to stay in touch and have a good idea of what most of us are up to. But we were quite excited to see so many of us in one place at the same time.

After some catching up at the reception, we made our way to the Trans continental Restaurant in Gastown, where we all enjoyed a lovely three-course dinner. With spouses/partners, 43 people attended the meal—including five expectant moms at various stages of pregnancy. All in all, it was a great evening of socializing and camaraderie.

Thank you to the Class of 1998 for making our reunion a success. Thank you for all your help, Jenn and Kathy. Looking forward to keeping in touch and meeting again in another ten years!

DMD 1999 REUNION
10th Year Reunion · March 6, 2009
A 25-year reunion dinner will be held at the Five Sails Restaurant at the Pan Pacific Hotel following the Annual Alumni Reception at the Pacific Dental Conference. Registration information coming soon at www.dentistry.ubc.ca/alumni

Contact Ray Fong DMD 1989 at rayfong@telus.net or Ernest Lam DMD 1989 at ernest.lam@utoronto.ca for details.

Planning a reunion? Call Alumni Relations for ideas at 604-822-6570

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

2000s
Hugh Kim
DMD 2002
In February 2007, I and UBC Dentistry alumni Mehran Aaseghabad (DMD 2002), Brent Helin (DMD 1996, MSc 1997) and Phoebe Tsang (DMD 2002) joined Kindness in Action (KIA) to volunteer in Barquisimeto, a small, musically affluent town southwest of Caracas, Venezuela.

KIA is an organization that began with four dentists in 1993 and now has over two hundred dental volunteers working on week-long projects all around the world. It is entirely volunteer-based and less than 1 percent of funds goes toward administrative costs. KIA aims not only to provide dental health services, but to educate and empower the people of developing countries.

We were part of a team of 34 dentists, hygienists, CEDAs, and non-dental compadres, and our mission was centred in a local orphanage called The Christian Foundation of Children and Aging. Our one-week journey was exceptional; within moments, we forgot about our comparatively luxurious dental operators at home and cherished our bare essentials. Our operators here were light-less, chair-less, suction-less, X-ray-less, and AC-less gymnasiums. We shifted quickly from realizing what we did not have, to realizing what we did have and making it work.

Lila Nabi
DMD 2002
In February 2007, I and UBC Dentistry alumni Mehran Aaseghabad (DMD 2002), Brent Helin (DMD 1996, MSc 1997) and Phoebe Tsang (DMD 2002) joined Kindness in Action (KIA) to volunteer in Barquisimeto, a small, musically affluent town southwest of Caracas, Venezuela.

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Queues of excited children accumulated. Our team came together swiftly, trying to accomplish as much dentistry as possible. Patients ranged from three to 30 years old, most experiencing dentistry for the first time ever.

We saw rampant tooth decay, primarily caused by diet. The consumption of refined sugars, particularly the substitution of cola drinks for water, lack of knowledge about the importance of oral hygiene, and limited access to fluoride have all contributed to poor oral health in Latin American countries. Our services mainly consisted of restorative amalgam fillings, stainless steel crowns, extractions, hygiene, fluoride treatments, and most importantly, dental education.

Despite our broken Spanish, our connection was unforgettably evident on the last day, when the children sang us a beautiful, heartfelt song to show their appreciation and gratitude. Our journey was most enlightening, making us appreciate and embrace the most basic yet most important of all human qualities—humanity.

For more information about Kindness in Action, visit kindnessinaction.ca.
4 (SATURDAY)
Early Orthodontic Treatment: An Evidence Based Approach
Dr. David Kennedy

9 (THURSDAY EVENING)
Real-Time Video Conferencing Consultations for Clinical Oral Pathology in BC
Dr. Chuck Shuler & Dr. Samantha Ng

15 (WEDNESDAY EVENING)
NEW STUDY SERIES SEMINARS!
UBC Advanced General Dentistry Seminar Series*

18 (SATURDAY)
Endodontics: Exciting Technology, Hidden Pitfalls (Hands on Course)
Dr. Kim Breslin

25 (SATURDAY)
Building a High Performance Dental Team
Ms. Sandy Chernoff

7 (SATURDAY)
Restorative Materials: What, Where, Why
Hands-on Course
Dr. Charles Wakefield

11 (WEDNESDAY EVENING)
NEW STUDY SERIES SEMINARS!
UBC Advanced General Dentistry Seminar Series*

16 (SATURDAY)
Implants for Fixed Prosthodontics
Dr. Mitch Condit

18 (SATURDAY)
If You Can’t Beat’em, Enjoy Them & When (Part 2)
Hands-on Course
Dr. Don Pitts

24—26 (FRIDAY, SATURDAY & SUNDAY)
Simple Implant Live Surgery
Dr. Mitch Condit

6 (SATURDAY)
Clinical Periodontal Therapy: What can we expect?
Hands-on Course
Dr. Charles Shuler, Dr. Fred Quarnstrom

7 (SATURDAY)
Inhalation and Oral Sedation in Dentistry
Hands-on Course
Ms. Debbie Preissl

10 (SATURDAY)
**NEW STUDY SERIES SEMINARS:**
UBC Advanced General Dentistry Seminar Series*

13 (THURSDAY EVENING)
**NEW STUDY SERIES SEMINARS:**
UBC Advanced General Dentistry Seminar Series*

15 (SATURDAY)
**NEW STUDY SERIES SEMINARS:**
UBC Advanced General Dentistry Seminar Series*

23 (SATURDAY)
From Gums to Guts: Periodontal Medicine
Dr. Susan Nimchuk, Dr. Dorin Ruse, Dr. Eli Whitney, Dr. Burton Goldman, Dr. Charles Shuler, Dr. David Macdonald, Dr. Phil Bearer, Dr. Chanty Su

6 (SATURDAY)
Take A Look…Save A Life!
Ms. Denise Leonide, Ms. Brenda Currie, Ms. Heather Biggar

7 (SATURDAY)
The Challenge of Patient Management
Hands-on Course
Ms. Heather Biggar

18—20 (SATURDAY & SUNDAY)
**NEW STUDY SERIES SEMINARS:**
UBC Advanced General Dentistry Seminar Series*

27 (SATURDAY)
The Festival of Mothers and Daughters
Dr. Ruby Bhandari DMD 2007· Dr. Jatinder Riar DMD 2003· Dr. Chung Liu· Dr. Harry Dhangu· Dr. Jas Dhangu· Dr. Gurpreet Sunilh· Dr. Roshanak Rahmanian· Sunstar Butler

Dr. Margaret Webb· Dr. Randy Allan· Dr. Kevin Doyle· Dr. Ross Fraser· Dr. Chris Hacker· Dr. Suzanne Philip· Dr. Mike Thomas· Dr. Laurie Vanzella· Dr. Ross Wright· Dr. Maurice Wong· Mr. Alex Markovits· Staff of Garden Court Dental Lab· Brasseler Canada· EC Moore Company· Garden Court Dental Lab· Jensen Premium Dental Products· Patterson Dental Canada Inc· Kerr Corporation· Suter Dental Manufacturing Co. Inc. THE FESTIVAL OF MOTHERS AND DAUGHTERS Dr. Ruby Bhandari DMD 2007· Dr. Jatinder Riar DMD 2003· Dr. Chung Liu· Dr. Harry Dhangu· Dr. Jas Dhangu· Dr. Gurpreet Sunilh· Dr. Roshanak Rahmanian· Sunstar Butler

UBC Dentistry is thankful to all volunteers that volunteered their time this year. We apologize if your name or organization was missed.