MARK YOUR CALENDARS!

WINTER – SPRING 2014

Adventure & Learn: Hawaii 2014
February 3 – 7, 2014 (Monday – Friday)

Whistler Ski Seminar
February 13 – 15, 2014 (Thursday – Saturday)

Thailand Travel and Learn
March 15 – 29, 2014 (Saturday – Saturday)

For more details, visit www.dentistry.ubc.ca/cde

SUMMER – FALL 2013

EVENTS FOR STUDENTS AND ALUMNI

Volunteer Community Clinics – Upcoming

Hul't-ul’tam Health Society (Chemainus)
July 18 – 21, 2013 (Thursday – Sunday)

Tl’tinqox-t’ Health Services (Anaham)
July 25 – 28, 2013 (Thursday – Sunday)

Vancouver Native Health Society (Vancouver)
August 24, 2013 (Saturday)

Annual Alumni & Friends Golf Tournament
September 15, 2013 (Saturday)

MORE EVENTS FOR ALUMNI

Open Wide Community Clinic Day, Burnaby
September 14, 2013 (Saturday)

Taste of Vancouver Island, Victoria
October 19, 2013 (Saturday)

Alumni Wine Reception at the TOODS Meeting, Kelowna
October 25, 2013 (Friday)

JANUARY – DECEMBER 2014

60TH ANNIVERSARY OF THE FACULTY OF DENTISTRY

For all the 2014 celebration events and dates, see page 45 in this issue of Impressions or www.dentistry.ubc.ca/50years

Alumni Pub Night, Calgary
November 15, 2013 (Friday)

More information about these events can be found on pages 44 – 45 in this issue of Impressions or at www.dentistry.ubc.ca/alumni

2 Dean’s Message
16 CSLGives DHDP Students an Edge
20 Shifting Gears With Disruptive Innovation
24 Restorative Biomaterials Research
28 DHDP Students: Less Traveled Roads
34 Time for a Graduate Specialty Clinic & JBM Revitalization
38 Look How Far We Have Come in 50 Years
41 Alumni Class Notes and Events
47 CDE Calendar
Dear Colleagues,

Welcome to the spring 2013 edition of UBC Faculty of Dentistry’s Impressions. I take great pleasure in once again sharing the Faculty’s undertakings with you—and in alerting you that in 2014 the Faculty will celebrate 50 years of accomplishments.

The growth and change in the Faculty over these 50 years has been significant. We invite all our alumni and colleagues in the oral health professions to visit UBC Dentistry anytime, to see first-hand what is occurring here. And we invite everyone to participate in the 50th anniversary events planned for 2014, when we will recognize the Faculty’s achievements since its beginnings in the early 1960s.

It has been another exciting academic year. This spring the first students completed the new graduate programs in orthodontics, pediatric dentistry and prosthodontics. UBC Dentistry now has six dental specialty graduate programs, and another new program in dental public health is moving through the final stages of UBC Senate approval. All these new programs have a strong research component—our research accomplishments continue to improve the international reputation and recognition of the Faculty of Dentistry.

Renovations that will enhance the student experience were completed in the John B. Macdonald Building. The Graduate Student Commons, in particular, provides an excellent environment for the graduate students to work in, both individually and together. The major articles in this edition of Impressions focus on some significant accomplishments in research and community service. Dr. Leann Donnelly and Ms. Diana Lin have developed a strong program that helps our dental hygiene students to appreciate the diversity of patients in the community and the diversity of their oral health needs, and to develop competencies for addressing these needs. The article shows yet another facet of how the Faculty is increasing its community engagement.

We also look at the Faculty’s expanded capacity in dental materials, both at the basic laboratory level and with respect to application in the Frontier Clinical Research Centre. The focus is on Drs. Dorin Ruse, Ricardo Carvalho and Adriana Mamos, who represent an incredible resource in supporting new innovations in dental materials, including supporting the research projects of students in the Faculty. Their work significantly amplifies our research productivity.

Another feature article profiles Dr. HsingChi Lin have developed a strong program that helps our dental hygiene students to appreciate the diversity of patients in the community and the diversity of their oral health needs, and to develop competencies for addressing these needs. The article shows yet another facet of how the Faculty is increasing its community engagement.

Yet again, the past year has seen UBC Dentistry faculty members receive numerous awards for their accomplishments and new grants to support their innovative research. We are happy and proud to recognize those achievements in this issue of Impressions.

And please, plan to join me and our outstanding students, staff and faculty members for our 50th anniversary celebrations in 2014. All the best,

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

Faculty Announces 50th Anniversary Celebrations

The year 2014 marks 50 years since eight students registered for the first dental class in the newly established Faculty of Dentistry at the University of British Columbia. Many events are planned to celebrate this and other milestones along the way from 1964.

All alumni and former and current students, faculty and staff are warmly invited to attend. A list of event dates and times can be found on page 45 in this issue of Impressions. But here is a sneak peek at some of the highlights.

In January, to kick off the anniversary year, the annual UBC Dentistry Research Day will present a special showcase of alumni research over the 50 years. In March, the three-day Pacific Dental Conference will specially honour the Faculty’s half-century, including the not-to-be-missed Annual Alumni Reception, which will get personal when 50 years of dental school sweethearts are celebrated. Meanwhile, on the UBC Point Grey campus, there will be an open house and barbecue lunch—visitors can tour the dental school during the day before attending the British Columbia Dental Association Toothfairy Gala in the evening. The Gala will celebrate the fifth decade of dentistry at UBC, and funds raised will benefit dental care for underserved children.

The UBC Dentistry 50th Anniversary Weekend will run from September 19 to 21, starting with the Welcome Reception and BZZR Garden on Friday night. Saturday will be packed with an all-day symposium, followed by the 50th Anniversary Celebration Dinner at the Commodore Ballroom featuring the faculty/ alumni band and special guests. On Sunday, the fun will continue at Morgan Creek Golf & Country Club for the Annual Alumni & Friends Golf Tournament.

You can meet the co-chairs of the 50th anniversary committee and check out 50 years of milestones in the Faculty of Dentistry on pages 38 to 39 in this issue of Impressions.

And most important, mark your calendars and come to the events in 2014. Celebrate with us!

Charles Shuler, DMD, PhD
Dean and Professor, Faculty of Dentistry
Dean and Associate Dean Receive BCDA Awards; Faculty and Alumni Among Winners

The British Columbia Dental Association (BCDA) honoured many individuals at their annual Toothfairy Gala in Vancouver on March 9, 2013, including UBC Dentistry faculty and alumni.

**President’s Award to Dean**

This year the BCDA bestowed one of their highest annual honours, the President’s Award, on Dr. Charles Shuler, professor and dean of UBC Dentistry. Shuler was lauded for his significant impact on dental students, new graduates and dentistry in BC.

The gala’s program guide notes: “Dean Charles Shuler has brought dental education closer to every corner of our great province.” The dean regularly travels across BC, visiting dental societies to promote the Faculty of Dentistry and its dental programs.

Known for his stewardship, Shuler has changed the admission rules for dental school to ensure 90 percent of the students come from BC, has implemented several graduate programs, including Endodontics, Orthodontics and Pediatric Dentistry, and has expanded outreach programs to serve the marginalized and complex patients in the Metro Vancouver area and beyond.

The BCDA particularly hails the close working relationship he has fostered between the provincial association and UBC Dentistry. Through this alliance, the dean promoted and expanded the Summer Student Practitioner Program, which enables third-year dental graduates and dentistry in BC.

Dr. Richard Wilczek, president of the BC Dental Association.

**Award of Merit from BCDA to Associate Dean**

A BCDA Award of Merit was given to Dr. Christopher Zed for his many contributions to the field of dentistry. Zed is associate dean of Strategic and External Affairs, and head of Postgraduate and Hospital Programs. He is also director of the UBC General Practice Residency Program.

His leadership and diligence,” the BCDA writes, “led to the inclusion of dentistry in a hospital setting when many believed it didn’t belong—dentistry has become a well-respected, state-of-the-art program at Vancouver General Hospital.”

The award also recognizes Zed as a respected practitioner and strong advocate and supporter of research, education and care in all environments. Zed is especially known for his work in underprivileged communities in the Lower Mainland, across the province and overseas in Vietnam and Cambodia where he regularly volunteers to support patient care.

**More BCDA Awards to Faculty and Alumni**

Distinguished Service Awards were presented to professor emeritus Dr. Robert Priddy; Dr. Saaida Rasul, part-time faculty member; and Dr. Ken Stones, part-time faculty member and active volunteer dentist in the Volunteer Community Clinic Program.

Awards of Merit were also bestowed on Dr. Doug Johnston, retired faculty member, former director of Graduate Pediatric Dentistry and former head of Pediatric Dentistry at BC Children’s Hospital, Dr. Ken Lee, part-time faculty member; and Dr. Robert McDougall, UBC Dentistry alumnus from the Class of 1991.

**Dr. Christopher Overall Wins IADR Distinguished Scientist Award**

The International Association for Dental Research has presented its 2013 IADR Distinguished Scientist Award for Research in Oral Biology to Dr. Christopher Overall, professor in the Department of Oral Biological & Medical Sciences and Canada Research Chair in Metalloproteinase Proteomics and Systems Biology. This award, one of the highest honours bestowed by IADR, recognizes Prof. Overall for his lifelong achievements as a scientist in the field of oral biology.

Overall is the pioneer of “degradomics”—a term he coined for a highly specialized field of biochemistry that uses all genomic and proteomic approaches to study the makeup of all proteases in an organism.

Moreover, Overall’s laboratory is the only one in Canada—and one of only a few in the world—that is exploring the new field of degradomics to understand the role of matrix metalloproteinases. This systems biology approach is revealing new roles for proteases in vivo, new diagnostic indicators of disease, and new drug targets to treat disease.

Overall and his team recently discovered a biological master switch that could provide a road map for treatment of arthritis and other inflammatory diseases like periodontitis. [For more information, see page 13 in this issue of Impressions.]

The award was presented to Overall at the opening ceremonies of the IADR’s 91st General Session & Exhibition on March 20, 2013, in Seattle, Washington.

**Students Win Award for Booth at Local Health Fair**

Attendants at the Vancouver Diversity Health Fair on March 9 would have found, among the 50 health- and wellness-related exhibitors, a UBC Dentistry booth staffed by the winners of the Outstanding Booth Contest.

Students Amberen Khan (BSDc 2013), Kevin Shen (DMD 2015), and Erin Chung, Kelvin Leung and Karen Nguyen (DMD 2016) welcomed visitors to their interactive display of oral health care information. Organizers of the fair credit the students with raising the bar for all health organization exhibitors.

The largest of its kind in Canada, the annual health fair takes place at the Croatian Cultural Centre in East Vancouver. The fair aims to engage ethnic communities and new immigrants with a wide range of health and wellness resources, which are presented in a number of languages.
Prof. Dieter Brömme Secures Five-Year Funding for Two Studies Involving Enzymes Linked to Osteoporosis, Arthritis and Cardiovascular Diseases

The Canadian Institutes of Health Research (CIHR) has awarded UBC Dentistry professor Dieter Brömme, Canada Research Chair in Proteases and Diseases, over $1.14 million for two studies to investigate the role of cathepsins in osteoporosis, arthritis and cardiovascular disease.

Osteoporosis, a disease resulting in loss of bone, affects the lives of millions of Canadians, and is a major burden to health care systems worldwide due to the increasing elderly population. Current treatments, such as hormone replacement therapy or bisphosphonates, have either various side effects or patent expiration issues. Arthritis is caused by an ineffective immune system attacking the body's own tissues—most commonly the joints, and also tendons, bones and ligaments—leading to inflammation, pain and tissue damage.

Just over $583,000 will fund “Mechanisms of Osteoclast Bone Resorption: Collagenase Activity of Cathepsin K.” This study focuses on cathepsin K as a novel pharmaceutical target for the treatment of osteoporosis and various forms of arthritis. Cathepsin K is a cysteine protease predominantly expressed in osteoclasts, cells which are responsible for the degradation of bone collagen.

Presently, in clinical trials that use inhibitors to block the activity of the protease cathepsin K, there is an improvement in the quality of bone, but the overall results still fall short due to off-target and off-site effects. Brömme and his team seek a cathepsin K inhibitor that will inhibit the osteoclast-mediated collagen degradation in bone but will not inhibit or otherwise affect the protease's activities in other types of cells.

“Our objective is to understand the cathepsin K-specific mechanism of collagen degradation, and understand how to exploit this knowledge in developing novel and highly selective cathepsin inhibitors. We also need to elucidate potential off-target and off-site inhibition effects and determine how to avoid them,” Brömme says.

There is a strong correlation between osteoporosis and calcification, the formation of mineral deposits in arteries. Arterial calcification makes blood vessels brittle and restricts blood flow, and is predictive of cardiovascular diseases like heart attack and stroke, which are the main causes of death in Canada.

Brömme’s other study, which received just over $556,000 from the CIHR, is titled “The Role of Cathepsins in Vascular Calcification.” As Brömme points out, little is known about the mechanism of calcification and whether the degradation of the matrix leads to mineralization, or vice versa. The calcification may actually be a kind of protective response that has lost control, thus causing the vessel destruction.

Calcification mainly happens in the extracellular matrix of blood vessels. The primary extracellular matrix component, elastin and collagen, are both heavily degraded by cathepsins during hardening of the arteries (atherosclerosis), and also during ballooning of blood vessels (aneurysms). Here, too, cathepsin K is of particular interest to Brömme. He and others have demonstrated that this enzyme is critically involved in both bone degradation and weakening of the arteries, though its specific role in calcification is unknown.

Since the introduction of a cathepsin K inhibitor is beneficial in the case of osteoporosis, would it also be beneficial to prevent calcification and resulting arterial degradation? Brömme predicts so.

Unclaimed, is about missing US prisoners of war. One character followed in the film, an American who had been lost since the Vietnam War ended in 1975, was found living in Vietnam with a wife and children. He speaks Vietnamese fluently, and has forgotten most of his English and his family back in the United States. The film crew and accompanying military veterans found him to be extremely quiet, introverted and suffering from extreme post-traumatic stress disorder. They were able to convince the war-torn veteran to have swabs of saliva and blood taken to be analyzed. Testing was done at the BOLD lab, against a DNA profile of the man’s sister—but the samples did not match. However, when a full story was disclosed by family members, it turned out that the sister and her missing brother likely had different fathers. Yet, upon meeting, the family recognized the missing man—he was, indeed, one of their own. He too was able to recognize his family.

In a previous documentary by Jorgenson, for the Mad Trapper, the BOLD lab identified the remains of the Mad Trapper of Rat River, thus revealing his identity. [For details of that story, see the fall 2009 issue of Impressions online at www.dentistry.ubc.ca/impressions.]

New Appointments: Full-Time Faculty

Hugh Kim, DMD, Dip Perio, MSc, PhD, FRCD(C), has joined the Department of Oral Biological & Medical Sciences as an assistant professor. Dr. Kim obtained his Doctor of Dental Medicine from the University of Montreal in 2000, followed by a Master of Science combined with a Diploma in Periodontics from the University of British Columbia in 2004, and a Doctor of Philosophy (Cell Biology) from the University of Toronto in 2010. Prior to returning to Vancouver, Kim completed a postdoctoral fellowship at Harvard University in Boston, Massachusetts. Kim’s research has been continuously funded through external fellowships from the Canadian Arthritis Network, the Heart and Stroke Foundation of Canada and the Canadian Institutes of Health Research (CIHR). Kim currently holds a CIHR Clinician-Scientist Award, which supported his postdoctoral fellowship at Harvard and will support his research at UBC. Kim is a principal investigator with the Centre for Blood Research, a research group of the Life Sciences Institute. His research is focused on platelet biology, specifically, on how biochemical signals are transduced (translated) by the platelet’s structural framework, or cytoskeleton, and how such signals may affect platelet function, and ultimately, oral health and disease. In addition to his research activities, Kim is a practicing periodontist and a diplomat of the American Board of Periodontology, and he teaches at the undergraduate and graduate levels.

Updates from BOLD

The Bureau of Legal Dentistry (BOLD) lab recently scored a hit on a 24-year-old cold case file of a missing person. A DNA match was confirmed between found human remains and the missing person.

The BOLD lab manages, on behalf of the BC Coroners Service, a provincial missing persons dental database, comparing dental records to found human remains. In 1989 a person went missing in Prince George. In Coquitlam, several months later, a mandible was found. The 770 kilometres of geographical distance between the two jurisdictions had prevented comparison of the two files—until recently. Original dental records for the missing person were obtained and compared to records of the mandible—and in February 2013 a match was confirmed.

Scientists at the BOLD lab often provide consultation services to the entertainment industry, lending their expertise on DNA testing to writers of crime drama television series such as CSI. Sometimes, for documentary films, the consultation involves actual forensic DNA analysis and attempts at identification.

A new documentary film by Michael Jorgenson, UBC Dentistry Announces Support for Students in Crisis: The Sweet Student Fund

UBC Dentistry is honoured to work with Dr. David Sweet OC and his friends, colleagues and long time associates to establish the Sweet Student Fund.

This fund will assist students in the Faculty of Dentistry who face personal crises during the course of their academic studies. Over the years, a number of dental students have experienced challenges such as life-threatening or debilitating illness, grief and loss, and other kinds of personal hardship that have compromised their ability to pay for their education. The Sweet Student Fund will help alleviate such unforeseen financial emergencies. As associate dean, Students, Dr. Sweet is committed to the educational experience of dentistry students, and this commitment extends to their health and well-being.

When you commit to help establish the Sweet Student Fund at UBC Dentistry, you are providing needed resources to help dental students who are challenged with unforeseen adversity. To support the Sweet Student Fund, contact Jane Merling at 604-822-5866 or merling@dentistry.ubc.ca.
Scientists from the Genome Institute at Washington University in St. Louis, Missouri, turned to Dr. John Abramyan, a researcher in the Richman Lab at UBC Dentistry, in their efforts to complete the genome map of the western painted turtle, a common species across North America and the only one native to BC. This is the first time the genome of any of the approximately 330 species of turtles has been analyzed—and the results are fascinating.

A National Institutes of Health National Research Service Award postdoctoral fellow, Abramyan was the perfect choice to analyze this genome. His childhood enthusiasm for turtles continues—to this day he keeps a few pets at his home base in California, where his mother is entrusted with their care. Abramyan has identified the “tooth-specific” enamel genes in the western painted turtle. Enamel loss is an irreversible dental problem.

Turtles once had complete sets of teeth like most other animals, whereas now all turtle species have beaks. “Turtles lost their teeth 200 to 150 million years ago, so we assumed their tooth genes would be long mutated and disappeared from the genome,” Abramyan says. “When we look at birds who lost their teeth 100 to 80 million years ago, their tooth genes are there, but already highly mutated. We see the same thing in baleen whales, which don’t produce teeth.”

Usually, once an organism stops producing teeth, their tooth enamel genes start to mutate and become non-functional. In turtles, however, as Abramyan and the principal investigators from the US found, most of the tooth enamel genes were still present and in pretty good shape, despite having lost their teeth well before birds evolved beaks. This indicates that turtles have a really slow mutation rate.

Understanding the genetics of turtle teeth may help us understand diseases like cancer, which is caused by mutation, as well as heart attacks, strokes and other situations where oxygen is cut off or where extreme environmental situations pose a threat.

Read a CTV News report about the significance of the western painted turtle as biodiversity in British Columbia and how scientists hope to use DNA could lead to treatment for hypothyroidism. Online at http://bit.ly/XOVGTF.

Watch a CTV News interview with John Abramyan where he discusses the significance of mapping the turtle genome. Online at http://bit.ly/13BbJ0V.

For his poster presentation, “Deprivation of Oral Health Status Among Low-Incomes in Vancouver’s Downtown Eastside,” graduate student Kishan K. Markoo, candidate for a master’s degree in Craniofacial Science, won a CIHR—Travel Awards—Student Research Award to attend the International Association of Dental Research General Session. His supervisor is Dr. Catherine Poh.

A graduate student of N. Dorin Ruse, Jean-François Nguyen, at the Université Paris Descartes, France, won—for his research in new and innovative testing methods of dental materials, and new ideas and approaches to improving and developing dental materials—an IADR Heraeus Travel Award to attend the International Association of Dental Research General Session.

The paper describes the use of molecular markers to characterize oral premalignant lesions according to their risk of developing into cancer. The results showed that changes in the number of gene copies at specific genomic loci, as visualized using fluorescent in situ hybridization (FISH), can be used to identify high-risk lesions—those that are more likely to develop into oral cancer.

The study’s findings have implications for patient treatment. The characterization techniques can be adapted to the existing set-up of many pathology laboratories, and the information yielded makes it possible to better help patients understand their treatment options. If patients are shown to be at high risk, they can opt to start aggressive treatment earlier.

“Currently, we adopt a ‘wait-and-watch’ approach to pathologically similar low-grade lesions. Either take 10 years or more to develop into cancer, in the majority of cases, or will never become cancerous,” says Poh, lead author of the article. “The markers identified in this paper allow us to categorize these lesions, which can have a potential oncogenic impact on patients in terms of alleviating anxiety and fear of the unknown, and on reducing costs for unnecessary follow-ups.”

The award was presented at the IADR’s 51st General Session & Exhibition on March 20, 2013, in Seattle, Washington.

Faculty, Students and an Alumnus Win IADR/AADR, ADEA, CADR and CIHR Awards for Papers

For her poster presentation, “Role of Connexins in Regulating Fibroblast Function in Wound Healing,” graduate student Rana Tarzemany, candidate for a doctorate degree in Craniofacial Science and a diploma in Periodontics, won a Canadian Institutes of Health Research (CIHR) Institute Community Support Travel Award to attend the International Association of Dental Research General Session. Her supervisor is Dr. Lari Häkkinen.

Adapted from original source: www.jcda.ca/article/d62

PHOTOS Recipients of the 2013 William J. Gies Award (L-R): Esther Chan, Sharr Mihal; student, (2012-2014 candidate, Catherine Poh, associate professor; and Ting-Ting Zhu, research associate. In the photo on the right: Drs. Mario Brondani and Shiva Khatami each received an Olav Alvares Award from the American Dental Education Association on March 16, 2013, in Seattle, Washington.

The American Dental Education Association honored assistant professor Dr. Mario Brondani with an Olav Alvares Award for best article published in the Journal of Dental Education in 2012. His paper, titled “Teaching Social Responsibility Through Community Service-Learning in Predoctoral Dental Education,” was selected under the category of junior faculty. Brondani is a core faculty member of UBC Dentistry’s Professionalism and Community Service Learning program, a course, offered in all four years of UBC’s dental curriculum, that combines classroom learning with community-based outreach initiatives.

Shiva Khatami (PhD 2010, supervisor Dr. Michael MacEntee) also won an Olav Alvares Award for best article published in the Journal of Dental Education in 2012 by a junior scholar. Her paper, titled “Clinical Reasoning in Dentistry: Across Levels of Expertise and Problems,” was written while completing her doctorate degree at UBC Dentistry.

Brondani and Khatami received their awards at the 2013 ADEA Annual Session & Exhibition on March 16, 2013, in Seattle, Washington. CADR—Student Research Award

Dr. James Richman, professor in the Department of Oral Health Sciences, and graduate student Sara Farahabadi’s research project, titled “Wnt5a Induces Enzymatic Degradation of Craniofacial Cartilage via JNK Signaling,” was first place in the Canadian Association of Dental Research’s senior basic science category—she garnered the CADR Student Research Award. The award, also sponsored by Henri Schein Canada, was given at the Annual General Meeting of the CADR, held in conjunction with the meeting of the International Association for Dental Research in Seattle, Washington, in March 2013. As an award recipient, Sara represented Canada at the IADR/Unilever Harton Competition in Seattle during the same month.

ADEA—Olav Alvares Awards

In the same month, Olav Alvares Awards were presented to the 2013 William J. Gies Award winners.

Dr. Katherine Poh and Lewi Zhang from the Faculty of Dentistry, and their colleagues, received the 2013 William J. Gies Award from the International and American Associations for Dental Research (IADR/AADR) for their paper, “Unique FISH Patterns Associated with Cancer Progression of Oral Dysplasia.” The award was presented to the researchers for authoring the best clinical research paper published in the Journal of Dental Education during the same month.

The paper describes the use of molecular markers to characterize oral premalignant lesions according to their risk of developing into cancer. The results showed that changes in the number of gene copies at specific genomic loci, as visualized using fluorescent in situ hybridization (FISH), can be used to identify high-risk lesions—those that are more likely to develop into oral cancer.

The study’s findings have implications for patient treatment. The characterization techniques can be adapted to the existing set-up of many pathology laboratories, and the information yielded makes it possible to better help patients understand their treatment options. If patients are shown to be at high risk, they can opt to start aggressive treatment earlier.

“Currently, we adopt a ‘wait-and-watch’ approach to pathologically similar low-grade lesions. Either take 10 years or more to develop into cancer, in the majority of cases, or will never become cancerous,” says Poh, lead author of the article. “The markers identified in this paper allow us to categorize these lesions, which can have a potential oncogenic impact on patients in terms of alleviating anxiety and fear of the unknown, and on reducing costs for unnecessary follow-ups.”

The award was presented at the IADR’s 51st General Session & Exhibition on March 20, 2013, in Seattle, Washington.

IADR/AADR—William J. Gies Award

For her poster presentation, “Role of Connexins in Regulating Fibroblast Function in Wound Healing,” graduate student Rana Tarzemany, candidate for a doctorate degree in Craniofacial Science and a diploma in Periodontics, won a Canadian Institutes of Health Research (CIHR) Institute Community Support Travel Award to attend the International Association of Dental Research General Session. Her supervisor is Dr. Lari Häkkinen.

For his poster presentation, “Deprivation of Oral Health Status Among Low-Incomes in Vancouver’s Downtown Eastside,” graduate student Kishan K. Markoo, candidate for a master’s degree in Craniofacial Science, won a CIHR Institute Community Support Travel Award to attend the International Association of Dental Research General Session.
A Top Honour from India to Dr. Ravindra Shah – The Hind Rattan Award

Dr. Ravindra Shah, with his sisters Kumudini (L) and Jenu, received the Hind Rattan Award in New Delhi on January 26, 2013.

For the many people around the world who know Dr. Ravindra Shah, it came as no surprise that he was bestowed with a Hind Rattan Award. This award, given by the Non-Resident Indian Welfare Society of India, is one of that country’s most prestigious national honours.

UBC Dentistry’s venerable director of International Relations was honoured for outstanding services, achievements and contributions in his field.

For over 27 years, Dr. Shah has lead UBC Dentistry’s International Relations program. He has been instrumental in bringing over 100 students annually to UBC Dentistry for academic visits. These students have come from over 51 countries. He also organizes exchange visits. These students have come from over 51 countries. He also organizes exchange visits. These students have come from over 51 countries. He also organizes exchange visits. These students have come from over 51 countries. He also organizes exchange visits.

The University of Benin is one of the foremost universities in West Africa. It is among the top-ranked in Nigeria.

Dr. Shah’s Founder’s Day Lecture was broadcast live on the Internet. Watch it at http://bit.ly/Shah_Rattan

At the annual College of Dental Surgeons of BC (CDSBC) awards ceremony held on March 7, 2013, UBC Dentistry faculty and alumni were well represented among those recognized for their contributions to the college.

Dr. Don Anderson, UBC Dentistry alumnus (DMD 1974), and Dr. Rob Coles, UBC Dentistry alumnus (DMD 1986) and member of the UBC Dentistry Board of Counsellors, each received a Distinguished Service Award. This award recognizes their outstanding and broad contributions to the profession of dentistry through their extensive involvement with the college.

Awards of Merit were conferred upon each of the following UBC Dentistry-affiliated professionals: Ms. Nadine Bunting, clinical instructor (radiography); Dr. Ken Chow, part-time faculty member; and alumni Drs. Karl Denk (DMD 1983), Warren Ennis (DMD 1988), Patricia Hunter (DMD 1983) and David Lawson (DMD 1973). The award recognizes volunteer involvement with CDSBC that significantly impacts the profession.

The college’s Special Group Award was presented to members of the Infection Prevention and Control Working Group. In addition to Dr. Elizabeth Bryce (MD), regional medical director for Infection Control at Vancouver Coastal Health, and registered dental hygienist Ms. Allison Ransier, the following UBC Dentistry affiliates were honoured: Dr. Leeann Donnelly, assistant professor (radiography); Dr. Lecia Donnelly, assistant professor and PhD 1995 alumnus; Dr. Mel Sawyer, former UBC Dentistry faculty member; and UBC alumnus Dr. Steven Wedan (DMD 1988).

The Hind Rattan Award (commonly translated as “Jewel of India”) is given each year on the eve of the Republic Day of India to a person of Indian origin residing outside India. Dr. Shah received his award on January 26 in New Delhi.

Dr. Ravindra Shah (front row, c) with faculty members from the University of Benin, Benin City, Nigeria.

The broad objective of Pliska’s study is to develop a better understanding of the craniofacial morphology and a possible orthodontic intervention for OSAS, which has the potential to benefit from orthopedic intervention of OSAS, the long-term goal of improving health outcomes and quality of life for these children.

For more information from the article “Global Education: A Qualitative Rather Than Quantitative Approach” in the spring 2012 issue of Impressions magazine online at www.dentistry.ubc.ca/go/glob_ed

The College of Dental Surgeons of BC 2013 award winners. Front row (L to R): Drs. Karl Denk and Warren Ennis, Ms. Rosie Frazen, Dr. Patricia Hunter, Ms. Nadine Bunting, Drs. Mel Sawyer and Brian Smith. Back row (L to R): Dr. Peter Stevenson-Moore (CDSBC president), Drs. Ken Chow, Scott Stewart, David Lawson, Rob Coles, David Vogt (PhD) and Ed Patrina, Mr. Jerome Matthey (CDSBC registrar and CEO). Missing: Drs. Don Anderson, Elizabeth Bryce (MD) and Lecia Donnelly (PhD). Ms. Allison Ransier; Dr. Steve Wedan.

CDSBC Recognizes UBC Faculty Members and Alumni

Dr. Ravindra Shah (front row, C) with faculty members from the University of Benin, Benin City, Nigeria.

For more information about Dr. Shah and International Relations at UBC Dentistry, read the article “Global Educators: A Qualitative Rather Than Quantitative Approach” in the spring 2002 issue of Impressions magazine online at www.dentistry.ubc.ca/go/glob_ed

To better understand the influence of craniofacial proportions and a possible orthodontic intervention for OSAS, Pliska received the 2013 Fred F. Schudy Memorial Research Award — $25,000 for biomedical research—from the American Association of Orthodontists Foundation.

The University of Benin is one of the foremost universities in West Africa. It is among the top-ranked in Nigeria.

Dr. Ravindra Shah, with his sisters Kumudini (L) and Jenu, received the Hind Rattan Award in New Delhi on January 26, 2013.

For the many people around the world who know Dr. Ravindra Shah, it came as no surprise that he was bestowed with a Hind Rattan Award. This award, given by the Non-Resident Indian Welfare Society of India, is one of that country’s most prestigious national honours.

UBC Dentistry’s venerable director of International Relations was honoured for outstanding services, achievements and contributions in his field.

For over 27 years, Dr. Shah has lead UBC Dentistry’s International Relations program. He has been instrumental in bringing over 100 students annually to UBC Dentistry for exchange visits. These students have come from over 51 countries. He also organizes academic visits for UBC students to over 20 countries. Shah sees his role as a catalyst for connecting people and institutions within today’s rapidly globalizing world.

The Hind Rattan Award (commonly translated as “Jewel of India”) is given each year on the eve of the Republic Day of India to a person of Indian origin residing outside India. Dr. Shah received his award on January 26 in New Delhi.

The broad objective of Pliska’s study is to develop a better understanding of the craniofacial morphology and a possible orthodontic intervention for OSAS, which has the potential to benefit from orthopedic intervention of OSAS, the long-term goal of improving health outcomes and quality of life for these children.
Dentistry’s Imaging Facility Popular with UBC Scientists and Corporate Users

Fish, rock and fuel cell specimens, and yes, teeth and bones—these were just some of the subjects in intriguing pictures shown at the opening celebration for UBC Dentistry’s advanced tissue and imaging facility. Located in the new Faculty of Pharmaceutical Sciences building since fall 2012, the Centre for High-Throughput Phenogenomics officially opened its doors on February 20, 2013.

Guests were treated to a demonstration of the centre’s imaging capabilities. Its comprehensive suite of technologies—scanning electron microscopy, optical imaging, X-ray imaging and mass spectroscopy—provides two- and three-dimensional graphic information and quantitative analysis of the structure of specimens.

The centre is a core facility and welcomes collaborative, interdisciplinary research projects from universities, research organizations and corporate users.

UCB Dentistry has a multidisciplinary research team using the facility to understand the structure of bone tissue, which is crucial to shedding light on inflammatory conditions such as gum disease and arthritis, as well as bone development abnormalities like cleft lip and cleft palate. Both areas affect millions of Canadians. [See the fall 2009 Impressions article “Moving to the Forefront of Biomaging” online at www.dentistry.ubc.ca/go/moving.]

Scientists in UBC’s Department of Earth and Ocean Sciences have been using the imaging facility to investigate the properties of shale rock, toward improving mining technologies. Other campus users come from the Civil, Electrical, Computer, Chemical and Biological Engineering programs, Physics, Zoology, Medicine and Pharmacy.

Users have also come from Simon Fraser University and the National Research Council, as well as from the corporate sector. Researchers from the Automotive Fuel Cell Cooperation (AFCC), located in Burnaby, BC, have been using the centre’s Helios scanning electron microscope. Having access to this state-of-the-art equipment and knowledgeable staff has, in the words of AFCC director of research Greg Fernette, “enabled us to accelerate our level of innovation, giving us a competitive edge.”

The Centre for High-Throughput Phenogenomics is supported by $1.1 million in funding from the Canada Foundation for Innovation, the BC Knowledge Development Fund and UBC’s Faculty of Dentistry.

To learn more about how this facility can support your scientific objectives, visit www.phenogenomics.dentistry.ubc.ca

CIHR Funding for Student to Address Gap in HIV/AIDS Educational Material and Resources

This summer Dr. Denise Laronde’s research in the area of oral cancer screening and early detection will receive a boost from one of her students, Marco Wu, a recent graduate from the Dental Hygiene Degree Program. Building on guided independent study work undertaken in his fourth year (see page 29 in this issue of Impressions), Wu will develop an educational module for oral mucosal screening within a high-risk community setting.

Wu was awarded a Canadian Institutes of Health Research Undergraduate Summer Studentship. Of 36 grants available across Canada, he won the only one specific for a dental hygiene student. The award is funded in partnership with the Canadian Dental Hygienists Association.

Barriers to oral care can be great for many people with HIV/AIDS and are often associated with financial limitations, stigma, discrimination and fear. These factors make it very difficult to find care providers who can or will attend to them.

Wu will collect and assess current oral health data and learn from the experiences of other HIV-positive individuals who do not access regular oral health care, and to aid in referring individuals with lesions to oral health professionals.

Overall Lab: Master Switch Discovery Could Provide Road Map for Treating Inflammatory Diseases

Scientists seeking solutions for treating chronic inflammation in diseases like arthritis now have a new culprit—an enzyme known as MMP2. New research from the Overall Lab shows that MMP2 functions as a master switch to activate inflammation.

According to Chris Overall, a professor in the Faculty of Dentistry and Canada Research Chair in Metalloproteinase Proteomics and Systems Biology who regularly employs arthritis as a disease model in his research, this is the first study to explain this pathway system. Arthritis is one of the major causes of pain and physical disability in Canada, with an economic burden of about $4 billion. In patients with arthritis, the immune system becomes overactive, attacking the body’s own tissues, commonly the joints. This attack causes inflammation, pain and joint damage.

The research, published recently in Science Signaling, examined the role a group of enzymes known as MMP proteases play in inflammation. Overall and his team found that the protease MMP2 can remove a block, allowing inflammation to become activated. This pathway is often overactive in patients with arthritis and other inflammatory diseases.

"Imagine a cart parked on a hill with a rock behind its wheel to prevent it from rolling down the hill," said Overall. "We found that MMP2 can remove that rock, causing the immune response to activate."

“We were amazed by these results. This shows us a new way to design drugs to treat many chronic inflammatory diseases like arthritis and even periodontal disease,” said Overall. Findings also provide a basis for developing a new diagnostic screen such as a blood test to detect the disease before severe damage to joints occurs.

Watch now: Chris Overall discusses his lab’s recent discovery on Global BC news, online at http://bit.ly/W28YeB

Regularly attends a dental hygiene program at the University of British Columbia in partnership with the Canadian Dental Hygiene Studentship Association.

Barriers to oral care can be great for many people with HIV/AIDS and are often associated with financial limitations, stigma, discrimination and fear. These factors make it very difficult to find care providers who can or will attend to them.

Wu will collect and assess current oral health data and learn from the experiences of other HIV-positive individuals who do not access regular oral health care, and to aid in referring individuals with lesions to oral health professionals.

This further result of Wu’s summer studentship will be to educate non-oral health care providers to screen for oral lesions in HIV-positive individuals who do not access regular oral health care and, to aid in referring individuals with lesions to oral health professionals.

To read or download past issues of Impressions at www.dentistry.ubc.ca/impressions

To subscribe to the RSS news feed at www.dentistry.ubc.ca/rss

Visit www.dentistry.ubc.ca/news

Stay Connected to UBC Dentistry

Visit www.dentistry.ubc.ca/news

Subcribe to the RSS news feed at www.dentistry.ubc.ca/rss

Follow news on Twitter @UBCDentistry (http://twitter.com/ubcdentistry)

Read or download past issues of Impressions at www.dentistry.ubc.ca/impressions

UBC DENTISTRY IMPRESSIONS

UBC DENTISTRY IMPRESSIONS
“Armed to the Teeth with αβ6 Integrin”

Haruna Larjava, professor and periodontology researcher, and his colleagues, have their recent research paper on enamel development highlighted in the editorial of the Journal of Cell Science, February 15, 2013 (volume 126, issue 4).

The editorial, titled “Armed to the Teeth with αβ6 Integrin,” illustrates the importance of αβ6 integrin in enamel development. Larjava and co-authors, including DMD student Leila Mohazab who is the first author of the study and at the time an MSc candidate, conclude that integrin αβ6 plays a crucial role in regulating the deposition of amelogenin (tooth enamel protein) and subsequent enamel biomineralization. By using an animal model deficient in αβ6 integrin, researchers found chalky, round incisors with a significantly reduced mineral-to-protein ratio, and molars with severe attrition. Tooth enamel is the hardest mineralized tissue in the body and serves to protect and insulate teeth from damage. The body cannot repair tooth enamel when it becomes damaged or deteriorated; therefore, understanding the characteristics of initial enamel growth is required. They propose, in the end of the study, that β6 integrin should be added to the list of candidate genes that cause a genetic defect in enamel formation. Patients with amelogenesis imperfecta suffer from severe caries in their dentition, require extensive restorative work and often lose many of their teeth.

Endodontics: There’s an App for That

Fresh thinking, effective editorial collaboration, current content, quality writing and superb visuals—the making of a good textbook—have now reached the convenience of anytime, anywhere learning for the digital age. World-renowned UBC Dentistry endodontics professor Dr. Marian Harapapalo and colleagues have launched Endodontic Morphology and Endodontic Instruments & Instrumentation, two digital publications for professionals in dentistry who need to know and understand the root canal anatomy of teeth in finest detail. Text and voice narration are interspersed in the image-rich publications. Learners can control every aspect of their experience in the publications—formatted for the iPad—with the swipe of a finger.

Endodontic Morphology contains numerous high-quality 3D movies of micro-CT-scanned teeth. Numeric data related to root canal anatomy is clearly presented. In addition to the canal anatomy of each permanent tooth, a variety of topics important in clinical endodontics—invaginations, evaginations, apical root canal, pulp stones, dentin structure, predentin, lateral canals, taurodontism, C-shaped canals, molarization and other different canal shapes—have been collected into valuable packages of information. Endodontic Instruments & Instrumentation is a cutting-edge manual addressing every aspect of modern root canal instruments and instrumentation.

These two publications are the first in the field that have been designed for interactive digital learning. Continuing education (CE) credits can be arranged through a post-test with UBC Dentistry’s Division of Continuing Dental Education.

Endodontic Morphology and Endodontic Instruments & Instrumentation are published by Artendo Enterprises Inc. These titles, at $35.99 each, are available through the iBookstore using the iBooks app. The second part of the day offered a discussion about the paradigm shift to computer-aided design and computer-aided manufacturing (CAD/CAM) systems, a review of material selection, and a look at final-restoration marginal fits.

Two clinical cases—a craniofacial imaging case and a case of complex crown restoration—were presented by world-renowned speaker on dental resin composites Dr. Jack Ferracane, from the University of California, San Francisco, whose keynote address was titled “Unprecedented examination of patients.”

Ferracane discussed research in the area of resin properties and performance enhancement. Research Day 2013 took place in the UBC Student Union Building Ballroom. All faculty and students attended the annual event.

Public health professional and assistant professor Dr. Mario Brendani has received two-year funding from the Vancouver Foundation to investigate and understand the roots of HIV stigma as it affects two marginalized communities: Aboriginal and refugee/immigrant.

HIV stigma may prevent people from being timely diagnosed and engaging in life-saving care due to misconceptions by the ill individuals about the disease progression, or due to discrimination by health care providers. Stigma may also prevent those who are HIV positive and marginalized from seeking educational health information and services, particularly if they experience disempowerment, health inequity and access to care barriers. A community-based participatory research (CBPR) framework will be used in the study. Focus group discussions (peer-led by volunteer trainees) will inductively explore the experience of HIV-positive community members, while individual interviews with HIV-negative people from the general public will gather their attitudes and beliefs. Brendani is working with co-investigators Dr. Lezann Donnelly, assistant professor in UBC Dentistry, and Paul Kerston from the Positive Living Society of BC.

The study aims to identify the factors contributing to stigma, inform the development of strategies to address and minimize it, and understand the educational and service needs of the two marginalized communities.

Publications by UBC Dentistry Faculty

Presentations in the first part of the annual forum, now in its sixth year, included ongoing research in the areas of cone beam computed tomography (CBCT) quality control, dosimetry and imaging of the pediatric patient, as well as an introduction to ultrasound imaging in dentistry—all increasingly popular in-office technologies that allow for unprecedented examination of patients.

For more information about these and other presentations, visit www.ubcdentistry.org.

Endodontic Research Day

Research Day held on January 22, 2013, gathered experts together to address a range of technological advances in clinical practice.

Endodontics is an area of dentistry that has seen many technological advances in recent years, including the development of new materials, techniques and tools. These advances have helped to improve the treatment outcomes for patients with root canal infections.

One of the speakers at the event was Dr. Jack Ferracane, a renowned endodontic researcher from the University of California, San Francisco. Ferracane discussed his recent research on the use of ultrasonic instruments in root canal treatment.

Another presentation was given by Dr. Mark Fogelman, a professor of endodontics at the University of British Columbia. Fogelman talked about the use of CBCT imaging in endodontics.

The event also included a panel discussion on the role of technology in endodontic education. The panelists included Dr. Jonathan Ng, Dr. Nancy Ford, and Dr. Jack Ferracane.

At the end of the day, the audience had the opportunity to participate in a trivia contest, with the winners receiving prizes.

In addition to the presentations, the event also included a poster session, where students and residents had the chance to present their research.

Overall, the event was a great success, with attendees learning about the latest advancements in endodontic treatment and research.
COMMUNITY SERVICE LEARNING GIVES UBC DENTAL HYGIENE STUDENTS AN EDGE

BY HEATHER CONN

When third-year UBC dental hygiene students visit their first long-term-care facility, half of them will cry. Some have never experienced the frail elderly; after all, their grandparents are only in their 60s. Others vow that they will never grow comfortable in such a setting. Yet, by the end of fourth year, many want to go back and work at the same facility for the summer, seeking to maintain their friendship with elderly clients.

Such transformation in attitudes and client relationships reflects one overall success of the Community Service Learning (CSL) program in UBC’s Dental Hygiene Degree Program (DHDP): it breaks down significant barriers to health care, enriching the lives of both students and clients. Whether it’s someone homeless, with mental illness or HIV/AIDS, students learn to see beyond stereotypes, social stigmas, and their own biases. They provide empathic on-site care to those whose oral health needs—and total health and psychosocial needs—would otherwise remain unmet.

Such stretching hands-on community work with special-care populations begins in second year and culminates in 300 hours of experience by the end of fourth year. This sets UBC’s Dental Hygiene Degree Program apart—it’s Canada’s only entry-level dental hygiene degree program with a focus on community practice. UBC students receive a bachelor of dental science (dental hygiene) degree.

“it’s about fostering social responsibility and awareness as a student, citizen and health professional,” says clinical assistant professor Diana Lin. Through the CSL program, students learn that dental hygiene practice is more than “cleaning teeth,” says Leesann Donnelly, an assistant professor in UBC’s dentistry faculty. As one student reflected: “it’s important to look at the individual as a whole.” Students learn about real-life health care challenges beyond UBC’s state-of-the-art clinic. Donnelly says. This can range from assisting at a cancer clinic to giving a homeless person a portable kit of toothpaste and a toothbrush. Most importantly, they learn compassion. “it’s extremely important to try to understand the client’s life situation and be a compassionate and approachable health care provider.”

UBC Dental Hygiene prides itself on what it calls “layering of curriculum.” Rather than parachuting students into an unfamiliar setting where they sink or swim, CSL enables them to build skills gradually and grow progressively more comfortable with special-care populations. This also enables them to maintain meaningful, ongoing relationships that continue throughout their years in the program.

Since 2009, second-year UBC dental hygiene students have provided oral health promotion programs to specific community groups, from schoolchildren to new immigrants. Some of these clients have never met a dental health professional. Second-year students learn how to provide empathic on-site care to those whose oral health needs—and total health and psychosocial needs—would otherwise remain unmet.
By third year, UBC dental hygiene students collaborate with the community to ensure culturally appropriate programs for diverse interests, “says Lin, who, along with Donnelly, oversees roughly 60 students in community service learning projects across the Lower Mainland.

In this final year, UBC dental hygiene students in CSL serve as valuable advocates, becoming involved in all aspects of a client’s health, not just his or her oral health needs. They’ll make a call and book an appointment for someone who doesn’t speak English, or help a client with complex health conditions, such as someone with HIV/AIDS, understand a lab report. If a client has no dental insurance, a student will arrange a visit to a low-cost dental clinic. “We’re working with communities so that they can support individuals in their community to take action and control their health,” Lin says. “It’s exciting to make a difference. I love it.”

As part of their community work, students prepare reports, which include a situation and needs analysis of the specific community’s strengths, weaknesses, opportunities and threats related to both oral and overall health. They’ll solicit feedback from community partners and program participants. “The program is really for the community, with the community—not just to the community,” says Lin.

Third-year work focuses on accessing people who do not seek out professional dental care, such as those who do not recognize that they might have an oral health care need. “When you go into a food bank, not everyone wants to hear about oral health while they’re lining up for soup,” says Lin.

Third-year students also begin to work alongside professionals, from dietitians, pharmacists, medical doctors and nurses to administrators, educators and public dental hygienists. Experiencing the dynamics of team work, they learn diplomacy and professionalism, critical thinking, and a deeper understanding of the life situations of special-care populations, while gaining more confidence to act independently. “We’ve built really good relationships in the communities we serve and have had nothing but positive feedback,” says Donnelly.

By fourth year, students are in the community one day a week, running clinical programs themselves, learning to be more efficient, realistic and adaptable. They’ve also gained more realistic expectations, Donnelly says, with a shift from “Oral health is the most important thing in the world” to “Oral health is an important aspect of a person’s life.”

In this final year, UBC dental hygiene students in CSL serve as valuable advocates, becoming involved in all aspects of a client’s health, not just his or her oral health needs. They’ll make a call and book an appointment for someone who doesn’t speak English, or help a client with complex health conditions, such as someone with HIV/AIDS, understand a lab report. If a client has no dental insurance, a student will arrange a visit to a low-cost dental clinic. “We’re working with communities so that they can support individuals in their community to take action and control their health,” Lin says. “It’s exciting to make a difference. I love it.”

As part of their community work, students prepare reports, which include a situation and needs analysis of the specific community’s strengths, weaknesses, opportunities and threats related to both oral and overall health. They’ll solicit feedback from community partners and program participants. “The program is really for the community, with the community—not just to the community,” says Lin.

Third-year work focuses on accessing people who do not seek out professional dental care, such as those who do not recognize that they might have an oral health care need. “When you go into a food bank, not everyone wants to hear about oral health while they’re lining up for soup,” says Lin.

Third-year students also begin to work alongside professionals, from dietitians, pharmacists, medical doctors and nurses to administrators, educators and public dental hygienists. Experiencing the dynamics of team work, they learn diplomacy and professionalism, critical thinking, and a deeper understanding of the life situations of special-care populations, while gaining more confidence to act independently. “We’ve built really good relationships in the communities we serve and have had nothing but positive feedback,” says Donnelly.

By fourth year, students are in the community one day a week, running clinical programs themselves, learning to be more efficient, realistic and adaptable. They’ve also gained more realistic expectations, Donnelly says, with a shift from “Oral health is the most important thing in the world” to “Oral health is an important aspect of a person’s life.”

In this final year, UBC dental hygiene students in CSL serve as valuable advocates, becoming involved in all aspects of a client’s health, not just his or her oral health needs. They’ll make a call and book an appointment for someone who doesn’t speak English, or help a client with complex health conditions, such as someone with HIV/AIDS, understand a lab report. If a client has no dental insurance, a student will arrange a visit to a low-cost dental clinic. “We’re working with communities so that they can support individuals in their community to take action and control their health,” Lin says. “It’s exciting to make a difference. I love it.”

As part of their community work, students prepare reports, which include a situation and needs analysis of the specific community’s strengths, weaknesses, opportunities and threats related to both oral and overall health. They’ll solicit feedback from community partners and program participants. “The program is really for the community, with the community—not just to the community,” says Lin.

Third-year work focuses on accessing people who do not seek out professional dental care, such as those who do not recognize that they might have an oral health care need. “When you go into a food bank, not everyone wants to hear about oral health while they’re lining up for soup,” says Lin.

Third-year students also begin to work alongside professionals, from dietitians, pharmacists, medical doctors and nurses to administrators, educators and public dental hygienists. Experiencing the dynamics of team work, they learn diplomacy and professionalism, critical thinking, and a deeper understanding of the life situations of special-care populations, while gaining more confidence to act independently. “We’ve built really good relationships in the communities we serve and have had nothing but positive feedback,” says Donnelly.

By fourth year, students are in the community one day a week, running clinical programs themselves, learning to be more efficient, realistic and adaptable. They’ve also gained more realistic expectations, Donnelly says, with a shift from “Oral health is the most important thing in the world” to “Oral health is an important aspect of a person’s life.”

In this final year, UBC dental hygiene students in CSL serve as valuable advocates, becoming involved in all aspects of a client’s health, not just his or her oral health needs. They’ll make a call and book an appointment for someone who doesn’t speak English, or help a client with complex health conditions, such as someone with HIV/AIDS, understand a lab report. If a client has no dental insurance, a student will arrange a visit to a low-cost dental clinic. “We’re working with communities so that they can support individuals in their community to take action and control their health,” Lin says. “It’s exciting to make a difference. I love it.”

As part of their community work, students prepare reports, which include a situation and needs analysis of the specific community’s strengths, weaknesses, opportunities and threats related to both oral and overall health. They’ll solicit feedback from community partners and program participants. “The program is really for the community, with the community—not just to the community,” says Lin.

Third-year work focuses on accessing people who do not seek out professional dental care, such as those who do not recognize that they might have an oral health care need. “When you go into a food bank, not everyone wants to hear about oral health while they’re lining up for soup,” says Lin.

Third-year students also begin to work alongside professionals, from dietitians, pharmacists, medical doctors and nurses to administrators, educators and public dental hygienists. Experiencing the dynamics of team work, they learn diplomacy and professionalism, critical thinking, and a deeper understanding of the life situations of special-care populations, while gaining more confidence to act independently. “We’ve built really good relationships in the communities we serve and have had nothing but positive feedback,” says Donnelly.

By fourth year, students are in the community one day a week, running clinical programs themselves, learning to be more efficient, realistic and adaptable. They’ve also gained more realistic expectations, Donnelly says, with a shift from “Oral health is the most important thing in the world” to “Oral health is an important aspect of a person’s life.”

In this final year, UBC dental hygiene students in CSL serve as valuable advocates, becoming involved in all aspects of a client’s health, not just his or her oral health needs. They’ll make a call and book an appointment for someone who doesn’t speak English, or help a client with complex health conditions, such as someone with HIV/AIDS, understand a lab report. If a client has no dental insurance, a student will arrange a visit to a low-cost dental clinic. “We’re working with communities so that they can support individuals in their community to take action and control their health,” Lin says. “It’s exciting to make a difference. I love it.”

As part of their community work, students prepare reports, which include a situation and needs analysis of the specific community’s strengths, weaknesses, opportunities and threats related to both oral and overall health. They’ll solicit feedback from community partners and program participants. “The program is really for the community, with the community—not just to the community,” says Lin.

Third-year work focuses on accessing people who do not seek out professional dental care, such as those who do not recognize that they might have an oral health care need. “When you go into a food bank, not everyone wants to hear about oral health while they’re lining up for soup,” says Lin.

Third-year students also begin to work alongside professionals, from dietitians, pharmacists, medical doctors and nurses to administrators, educators and public dental hygienists. Experiencing the dynamics of team work, they learn diplomacy and professionalism, critical thinking, and a deeper understanding of the life situations of special-care populations, while gaining more confidence to act independently. “We’ve built really good relationships in the communities we serve and have had nothing but positive feedback,” says Donnelly.

By fourth year, students are in the community one day a week, running clinical programs themselves, learning to be more efficient, realistic and adaptable. They’ve also gained more realistic expectations, Donnelly says, with a shift from “Oral health is the most important thing in the world” to “Oral health is an important aspect of a person’s life.”

In this final year, UBC dental hygiene students in CSL serve as valuable advocates, becoming involved in all aspects of a client’s health, not just his or her oral health needs. They’ll make a call and book an appointment for someone who doesn’t speak English, or help a client with complex health conditions, such as someone with HIV/AIDS, understand a lab report. If a client has no dental insurance, a student will arrange a visit to a low-cost dental clinic. “We’re working with communities so that they can support individuals in their community to take action and control their health,” Lin says. “It’s exciting to make a difference. I love it.”

As part of their community work, students prepare reports, which include a situation and needs analysis of the specific community’s strengths, weaknesses, opportunities and threats related to both oral and overall health. They’ll solicit feedback from community partners and program participants. “The program is really for the community, with the community—not just to the community,” says Lin.

Third-year work focuses on accessing people who do not seek out professional dental care, such as those who do not recognize that they might have an oral health care need. “When you go into a food bank, not everyone wants to hear about oral health while they’re lining up for soup,” says Lin.

Third-year students also begin to work alongside professionals, from dietitians, pharmacists, medical doctors and nurses to administrators, educators and public dental hygienists. Experiencing the dynamics of team work, they learn diplomacy and professionalism, critical thinking, and a deeper understanding of the life situations of special-care populations, while gaining more confidence to act independently. “We’ve built really good relationships in the communities we serve and have had nothing but positive feedback,” says Donnelly.
SHIFTING GEARS WITH DISRUPTIVE INNOVATION

BY LESLEY EVANS OGDEN

Sometimes an innovation comes along that changes everything. Like Google and the Model T Ford, the innovation doesn’t just change the status quo—it displaces it. Every once in a while that “disruptive innovation” is not a technology. It’s a person.

Such is the case with Dr. HsingChi von Bergmann, who felt like a round peg in a square hole when she joined UBC Faculty of Dentistry as an associate professor in 2010. Neither an oral science researcher nor a dentist, Dr. von Bergmann was hired because of her expertise in educational research and her desire to work toward one of the faculty’s strategic goals—enhancing the student experience.

At first it was “a difficult marriage,” says von Bergmann, who came to UBC from her position as an associate professor in science education at the University of Calgary. She describes her integration into UBC Dentistry as a culture shock for both herself and other faculty members. Her presence on the faculty, she suspects, was initially enigmatic—many colleagues were unsure of how to make use of her expertise.

Von Bergmann has a remarkable track record of science education research. During her seven years on faculty at the University of Calgary as coordinator of curriculum, teaching and learning in the Faculty of Education, and evaluation consultant for the Faculty of Science, she dug deep into the application of evidence-based educational practices to science teaching. This made her an ideal candidate for UBC Dentistry in its quest to attract a partner that would support their teaching of evidence-based dentistry.

In 2008 she co-founded the Hong Kong Accord on Global Science Education. The accord represented a move away from just comparing countries’ science education systems, and a step toward promoting international collaboration. Von Bergmann looks upon global science education—well delivered—as a mechanism for solving global problems. Her global philosophy and experience align well with another of UBC Dentistry’s strategic goals: to expand the international presence at UBC and UBC’s presence globally.
After two years at UBC, von Bergmann is confident that her approaches are relevant, useful and no longer completely alien to dentistry. Her research—on topics ranging from the development of critical thinking activities to enhancing undergraduate student study habits—is designed to take UBC’s already progressive dental curriculum a few notches higher. In one recent project, for example, von Bergmann collaborated on a course redesign that transformed a previously passive learning situation (teacher-centred, with lecturing as the main instructional approach) into active learning. Graduate students prepared seminars for their classmates and developed synthesis exercises (for example, von Bergmann collaborated on a Delphi method—a structured, systematic extraction of the reproduction module is essential part of the ongoing and increasing number of conversations she has with dental faculty. As faculty have come to recognize what they can bring and what she can bring, it has transformed a difficult marriage . . . into a stronger and vibrant one.

Shifting Gears—At Work and Home

Whatever the weather, von Bergmann commutes to work each day on a vehicle that was very much a disruptive innovation when it burst on the scene—the bicycle. Just as she applies her knowledge tool kit to educational research, when it comes to cycling, she is well prepared. “I have all the gear,” she explains. “Vancouver rain is actually not that bad. It’s more like drizzle,” she says, exemplifying her positive attitude about life in general, as well as the impacts of her research. “I tend not to focus on the dark side,” she muses. “I don’t think things are too bad, I just think about what I can bring and what I can bring, and Home.”
Three leading researchers in the dynamic field of restorative biomaterials are investigating new and better solutions to the big problem of dental restoration treatments breaking down too soon. Each one looks at the root causes of restoration failure—outside mechanical stresses, attacks from the body, and variations in dental handling and patients’ oral care—from a different perspective. Now their advances in the lab are ready to move into prime-time testing by industry and clinical trials with patients.

N. Dorin Ruse: Fracture Mechanics-Based Fatigue Studies

Dorin Ruse’s path toward becoming a top researcher in the field of restorative dental biomaterials was unexpected. Trained as a chemist at Babes-Bolyai University in Romania, he left that country in 1981 to seek better opportunities for himself and his young family. He just wanted to escape a communist regime. I landed in Toronto with a five-year-old child, a wife who couldn’t speak any English, and US$1,000. I saw an ad in the Saturday newspaper looking for a research chemist in a lab in the Faculty of Dentistry at the University of Toronto and applied for the position,” says Ruse, now a UBC Dentistry professor and chair of the Division of Biomaterials, in the Department of Oral Biological & Medical Sciences. He is also an associate member in the Faculty of Applied Science’s Department of Materials Engineering.

Ruse knew nothing about dentistry, but Dennis Smith, the Q of T faculty’s head of biomaterials, hired him because of his chemistry background. Smith, an Order of Canada recipient who had an illustrious chemistry background, Smith, an Order of Canada recipient who had an illustrious chemistry background. Smith, an Order of Canada recipient who had an illustrious chemistry background. Smith, an Order of Canada recipient who had an illustrious chemistry background. Smith, an Order of Canada recipient who had an illustrious chemistry background. Smith, an Order of Canada recipient who had an illustrious chemistry background. Smith, an Order of Canada recipient who had an illustrious chemistry background. Smith, an Order of Canada recipient who had an illustrious chemistry background. Smith, an Order of Canada recipient who had an illustrious chemistry background. Smith, an Order of Canada recipient who had an illustrious career as a leader in biomaterials within the materials should be applied and why, they will help them to succeed in clinical practice. “The success of the dentist depends on understanding the science behind the materials and the art of applying the materials. If the dentist doesn’t understand the properties of adhesives, for example, the patient will have a poor restoration with a short life. You can have an inferior material and an excellent dentist, but the results could be better than with an excellent material and a poor dentist. If students understand how the materials should be applied and why, they will become better dentists,” he says.

While studying the theory and methodology for the classical technique of shear bond strength testing for dental adhesives at U of T, Ruse began to have serious questions about its limitations. “You don’t really know where the weakness is. When I started my own research lab at UBC, I decided to shift to a fracture mechanics approach,” says Ruse, who has been a pioneer in fatigue performance testing of adhesives and bond interfaces to evaluate their longevity in real life. Ruse developed the influential NTP (notchless triangular prism) specimen fracture toughness test early in his career at UBC. The Ruse method is well recognized for its relative simplicity and advantage of having an easier sample preparation technique than other fracture toughness tests. His method has been applied in research to test a wide range of dental materials, as well as adhesive interfaces between dentin and composites, dentin and cement, enamel and composites, enamel and cement, and metal and ceramics.

Ruse maintains that the results of fracture mechanics-based fatigue studies better correlate with long-term clinical performance than short-term mechanical tests do. “In general, dental materials and adhesive interfaces fail by crack initiation and propagation. Fracture mechanics is a better predictor of how a material will behave and of where a material will break in real life than other testing methodologies. We would like to see a fracture mechanics approach applied more widely to dental restorative materials,” he says. He also believes that fatigue performance studies would help to address the problem of short-lived materials being brought to market prematurely. “This is the type of testing that should be done by the manufacturer before the product comes on the market. Patients are being treated as guinea pigs and dentists are being used to run trials that should be done in-house,” says Ruse.

In teaching biomaterials to dental students, Ruse emphasizes how this vital technical knowledge will help them to succeed in clinical practice. “The success of the dentist depends on understanding the science behind the materials and the art of applying the materials. If the dentist doesn’t understand the properties of adhesives, for example, the patient will have a poor restoration with a short life. You can have an inferior material and an excellent dentist, but the results could be better than with an excellent material and a poor dentist. If students understand how the materials should be applied and why, they will become better dentists,” he says.
We confirmed that chlorhexidine is a very effective agent in inhibiting collagen fibril degradation, and it strengthens collagen fibrils during the bonding procedure, an alternative approach to traditional adhesives. "If we can make the collagen stronger, it will be resistant to degradation regardless of the type of enzyme," explains Carvalho. To assess the effectiveness of different inhibitors and cross-linkers in prolonging restorations, he will use the widely adopted non-trimming microstructure bonding technique method to be inverted.

Carvalho is collaborating on a project with researchers at Georgia Regents University to develop new bioactive dental adhesives. "A dream material will be one that includes either enzyme inhibitors or cross-linking agents in composition to make dental restorations last longer," he says.

In this study, the cut surface of a tooth exposes dentin as the substrate where adhesion and bonding are needed when fillings are being performed. The hole of the dentin tabulae, and in-between the holes the structure is mainly composed of odontoblast and odontooblast fibrils. The odontoblast cells are the sensory that provide the bond of the resin to the tooth structure, thus the damage of the odontoblast leads to maintaining the bond and the restoration in function.

In the same tooth surface after the action of the enzyme cathepsin K (catK) for two hours, the enzyme attacks the collagen fibrils and breaks into small fragments, resulting in total destruction of the collagen. Because catK is present in the tooth structure, the collagen fibrils that are non-adherent to the enamel matrix can be degraded by the catK and lead to its failure of the bond, and consequently the failure of the restoration.

The centre will provide the infrastructure and services to help facilitate clinical studies. This support will include protocol review, statistical consultation, budget planning, regulatory compliance, recruitment of subjects, data collection and impact preparation.

It will also offer opportunities for industry and corporate sponsors to run clinical tests to test and validate their products. "Companies need to do clinical studies with patients to properly evaluate and reinforce the quality and goodness of their products. We can collaborate with them to design those studies and provide the support, services and expertise needed to conduct clinical trials effectively and efficiently," says Carvalho.

To find out more about the Frontier Clinical Research Centre, visit www.fcrc.ubc.ca

Frontier Clinical Research Centre

As director of UBC Dentistry’s new Frontier Clinical Research Centre, Ricardo Carvalho is building a dedicated facility for all types of dental-related, patient-based research in Canada. "This is where patients will be treated on an ongoing basis and the treatment will have a strong research component. My vision is of a facility where all faculty who want to be involved in clinical, patient-centred research can design and run the clinical trials needed to translate promising bench-top research into routine clinical practice," says Carvalho.

The centre will provide the infrastructure and services to help facilitate clinical studies. This support will include protocol review, statistical consultation, budget planning, regulatory compliance, recruitment of subjects, data collection and impact preparation.

It will also offer opportunities for industry and corporate sponsors to run clinical tests to test and validate their products. "Companies need to do clinical studies with patients to properly evaluate and reinforce the quality and goodness of their products. We can collaborate with them to design those studies and provide the support, services and expertise needed to conduct clinical trials effectively and efficiently," says Carvalho.

To find out more about the Frontier Clinical Research Centre, visit www.fcrc.ubc.ca

Adriana Manso: Quest for New Resin Composites

Adriana Manso’s efforts to improve the quality and durability of dental restorations, through her teaching and research, are grounded in 15 years of experience treating patients as a practicing dentist. “Everyday practice requires knowledge of current and cutting-edge technologies. As an example, if the dentist doesn’t know how to properly handle dental adhesives, the patient can have post-operative sensitivity. The handling of the dental material can also result in the restoration being more or less durable.”

Manso ensures students know why it’s important for dentists to educate patients about their role in prolonging the life of a restoration procedure. “Any type of preventive or restorative treatment needs attention. The restorations are more prone to have a problem in a shorter period of time if the patient is not properly educated for regular maintenance,” says Manso.

In her current research, Manso has taken on the challenge of minimizing the breakdown of the adhesive/dentin interface over time through chemical reactions with water. In pre-clinical studies, she has tested an adhesive bonding technique that removes intrinsic water from dentin before the dental adhesive is applied.

“Before applying the adhesive, we chemically dry the tooth with an ethanol solution instead of air drying the tooth. We’ve done this in a clinically feasible time of 15 seconds,” explains Manso, a clinical assistant professor in the Department of Oral Biological & Medical Sciences, who has specialty degrees in endodontics and operative dentistry, a master’s degree in operative dentistry and a PhD in dental materials from the University of São Paulo.

She is also investigating a combined approach, in which ethanol mixed with an enzyme inhibitor is applied before the dental adhesive. "The goal of the combined technique is to minimize degradation from both the adhesive resin and the collagen fibril from the dentin," says Manso, who joined UBC Dentistry in 2011. She was drawn to the opportunities at UBC teaching dental materials and for doing evidence-based research and translating that into clinical practice at a leading North American university and dental school.

Manso is excited by a major effort among researchers around the world to develop new resin composite materials with durability properties similar to dental amalgam, without the mercury waste and environmental issues. Manso plans to pursue research to improve the mechanical properties of resin composites and also develop a resin composite that can be self-adhesive and bioactive.

This would eliminate the need for dental adhesives, provide good interfacial sealing, and eliminate intra- and inter-operative variations to prevent recurrent caries. The ideal material would be something that could also work in remote areas where it could be applied in a simple way. “This would benefit everyone in places where they can’t afford high-end equipment or long patient or clinical time to provide good care,” she says. Researchers around the world are pursuing a range of approaches to develop materials that bond directly to the tooth structure and replace amalgam. The goal is to achieve a dental material that adheres to the tooth in the same way as a dental adhesive does, even without the intermediate layer of acidic etching or phosphoric acid, with dentin demineralization (nano-etch) and intradental demineraliza-
Three Dental Hygiene Students Forge Their Own ‘Less Travelled’ Roads

BY TERRY WINTONYK

It made “all the difference” for the American poet Robert Frost. Now a popular axiom, taking the road “less travelled” presumes positive, though hard-won, results. Three fourth-year students in the Dental Hygiene Degree Program at UBC each took their own road beyond the established curriculum, to explore a topic of their choosing, through an elective course—the Guided Independent Study (GIS).

Jennifer—A Desire to Drive the Profession Forward

When Jennifer Vandergaag came to her fork in the road, she knew which direction to take. The Guided Independent Study was an obvious route since she was already interested in graduate work, with an aspiration toward education or administration.

Jennifer’s guided study focused on the regulatory processes involved in changing education credentials for dental hygiene. Currently, almost all dental hygiene in Canada graduate with a two- or three-year diploma from a college program; UBC, however, offers a four-year baccalaureate degree in dental hygiene.

As a first step, Jennifer investigated these discrepancies in dental hygiene education. She saw value in both the college and university routes—both graduate highly skilled professionals—but she needed to know more about the long-term benefits of undertaking a four-year degree. She did an in-depth exploration of the history of dental hygiene education and an analysis of the literature about baccalaureate education for the health professions in general.

To better understand regulatory change processes and some of the governmental, professional and political challenges involved with credential advancement, Jennifer interviewed the acting registrar of the College of Dental Hygienists of BC. The interview was audio-recorded, transcribed verbatim, coded and analyzed.

Prof. Zul Kanji, acting director of UBC’s Dental Hygiene Degree Program, provided expert guidance for collecting research data from an interview. “By following some commonly adopted methods, Jennifer gained a valuable first exposure to a qualitative research approach,” he says.

Through the interview and her other research, Jennifer learned that Canada would require evidence that a credential advancement in dental hygiene directly results in an improvement in client care outcomes. She presented her findings to faculty members and all 90 students of UBC’s Dental Hygiene Degree Program.

Jennifer notes that her project is small scale, but it does contain information about abilities particularly fostered in baccalaureate education, such as critical thinking, research use and interdisciplinary collaboration. She also cites other countries, such as Finland, Holland, Italy, Slovakia and the Netherlands, where the baccalaureate is now the minimum requirement for entry to practice in hygiene.

Kanji says, “Jennifer brought a lot of passion for the subject, which certainly set her up for success in a course of this structure. Through the Guided Independent Study, she has been exposed, on a smaller scale level, to what she could experience in graduate studies learning.”

According to Jennifer, the Guided Independent Study cured her procrastination. “I was no one to prod me; no one telling me what to do. I wrote the learning contract and determined the deadlines. It was a different way of learning.”

Before she begins a graduate degree with a wider scope in the realm of public health and health administration, Jennifer plans to spend a few years gaining clinical experience to better understand the profession she wants to advocate for and drive forward, down “the road.”

Ambreen—A Cultural Connection Stirs Research Direction

While investigating tobacco cessation for her Guided Independent Study, Ambreen Khan realized that water pipe use can be another source of nicotine intake. In Middle Eastern and South Asian cultures, tobacco or herbal substances that are often flavoured with fruit and other ingredients (shisha) are smoked through a pipe with a water chamber (hookah) that cools the smoke before inhalation. Ambreen, originally from Pakistan, says, “In my culture, its use is very common. It really hit home that this is something I should investigate further.”

Ambreen’s GIS project supervisor was Dr. Denise Laronde, a researcher who studies oral cancer screening and early detection. “It was quite exciting, from an instructor point of view, to see Ambreen discover a research topic she is passionate about and that she can relate to personally,” Laronde says.

Ambreen set out to do a literature review and to prepare for a health promotion fair in early spring. She remained cool about the stressful work load and says she was able to remain motivated because of her personal connection to the topic. “It was exciting, because I know so much about its use and the products out there,” she says, acknowledging that her family members use the water pipe in social settings, “but I didn’t know how bad it really is.” Ambreen is concerned about the growing trend of tobacco lounges and bars that are becoming more common.

At the community health fair, Ambreen presented her public information pamphlet and poster outlining the risks of using alternative nicotine substances, including substances used in water pipes. Risks include cancer, respiratory illness and low birth weight. And, she warns, water pipe use can increase the spread of diseases like herpes, hepatitis and tuberculosis, because the instrument is shared among users.

While Ambreen’s immediate plans are to practise as a clinician in dental hygiene, she has her eye on research and education. “I took a guided independent study to learn whether I could do research and found out that I really enjoy it.” Her GIS literature review is a solid look at what research has been done on the effects of water pipe use—and what still needs to be done.

Current research on the effects of water pipe use is scant. “I want to do my own research on it and contribute to the body of knowledge,” she says. “The course helped me find my passion.” For Ambreen, this new-found desire, discovered on her road ‘less travelled,’ means all the difference.

Marco—Headed Down an Oral Pathology Path

Marco Wu was inspired by previous students to undertake a guided independent study. Through their presentations, he saw the appeal of following his own line of inquiry. Marco wanted to know more about oral pathology, so he, too, turned to Dr. Denise Laronde for help in narrowing this broad topic down to his burning question: What does a dentist or a dental hygienist need to know about the oral biopsy?

Marco wanted to address an inconsistency he understood existed—that is, hesitation or uncertainty among some dentists and dental hygienists around performing an oral biopsy procedure or referring it to a specialist.
A volunteer dentistry mission to India has taught four UBC students to see the whole patient—including his or her social and economic context, cultural beliefs and values—not just the ailing tooth.

In December, fourth-year dentistry students Akashdeep Villing, Amandeep Hans and Vikrant Sharma and third-year student Tanmeet Singh arrived in India to set up dental camps at local factories and elementary schools. They had intended to provide straightforward dental checkups and extractions, but learned that to get to the tooth, you first have to get the patient to open up.

The four set off on their adventure on their own accord after meeting a visitor to UBC Dentistry from India and hearing about the unmet dental needs prevalent in his country. The group received valuable guidance and support for dental supplies from the Dental Mission Project Society (see sidebar) and Patterson Dental.

The Indian workers the students served made on average $20 a month, and dental health is a low priority. “Many patients refused to have infected root tips and even loose teeth extracted,” says Villing. “We couldn’t use long-term consequences to convince patients to treat their infections; they thought strictly in the short term. ‘If you take it out, will it hurt today?’ was their most pressing concern.”

With the help of the Baba Jarawant Singh Dental College in Ludhiana, Punjab, the UBC students—who all spoke Punjabi—set up a clinic at a factory on the outskirts of the city and completed more than 70 checkups, offering advice and counselling about oral health and future dental problems.

“Workers were astounded that we travelled such long distances at our own expense to offer free dental care to them,” Hans says. “That gave us some social credibility to offer advice as well.”

Before the trip, Hans thought offering treatment for pain relief would be a piece of cake—that people would jump at the opportunity to trade long-term pain for short-term discomfort.

“Instead, we were bombarded with requests for teeth whitening,” says Hans. “Most people refused treatment such as an extraction, but were open to basic advice on proper brushing because it promised whiter teeth.”

Yet, the team was not dissuaded. To be effective, Hans took a step back to gauge the knowledge of his patients. He realized he could not assume they had a basic understanding about oral health or the seriousness of dental decay, and would simply comply with treatment. He learned how to work with patients on their terms, understanding their references.

“We realized that we couldn’t change their whole belief system overnight,” Villing adds. “But we did feel that we had a positive impact.”

That meant knowing a seed was planted about the awareness and importance of oral health.

In addition to the factory clinics, the UBC Dentistry team also staged their dental camp at a local elementary school. Oral hygiene education played a large role with the children, many of whom suffered from ectopic eruptions (permanent teeth growing before baby teeth fall out), poor hygiene and retained decayed primary teeth. They found children more receptive and eager to make changes. Parents were also receptive to advice about the necessity of orthodontic intervention. The team has tentative plans to return to the school and set up a full restoration camp.

“A practitioner has to consider the social dynamics at play, and in our case in India, having white teeth was deemed more valuable than basic treatment. We need to understand those we serve, and learn from them.”

Dentistry students “cut their teeth” in volunteer dentistry throughout their four years at UBC in the faculty’s Community Volunteer Clinic Program as well as with outside groups such as the Dental Mission Project Society, run by DMD 1972 alumnus Dr. Doug Nielsen. Community service learning opportunities build confidence and help foster a lifetime of global citizenship.

“Returning to the country that raised our parents and shaped much of our lives was a great experience,” Villing says. “The dentistry we were able to perform was also a blessing.”

After his experience in India, Hans says he’s more prepared to work with a broader population of patients, especially in other countries as a volunteer dentist. “A practitioner has to consider the social dynamics at play, and in our case in India, having white teeth was deemed more valuable than basic treatment. We need to understand those we serve, and learn from them.”

Dentistry students “cut their teeth” in volunteer dentistry throughout their four years at UBC in the faculty’s Community Volunteer Clinic Program as well as with outside groups such as the Dental Mission Project Society, run by DMD 1972 alumnus Dr. Doug Nielsen. Community service learning opportunities build confidence and help foster a lifetime of global citizenship.

“Returning to the country that raised our parents and shaped much of our lives was a great experience,” Villing says. “The dentistry we were able to perform was also a blessing.”

After his experience in India, Hans says he’s more prepared to work with a broader population of patients, especially in other countries as a volunteer dentist. “A practitioner has to consider the social dynamics at play, and in our case in India, having white teeth was deemed more valuable than basic treatment. We need to understand those we serve, and learn from them.”

Dentistry students “cut their teeth” in volunteer dentistry throughout their four years at UBC in the faculty’s Community Volunteer Clinic Program as well as with outside groups such as the Dental Mission Project Society, run by DMD 1972 alumnus Dr. Doug Nielsen. Community service learning opportunities build confidence and help foster a lifetime of global citizenship.

“The dentistry mission trip somewhere in the world, contact the society through its website at www.thedentalmissionsociety.com.

The Dental Mission Project Society
Do you want to reach out to the world?

The Dental Mission Project Society supports regions in desperate need of oral health care and education—around the world and in our own backyard. The non-profit society is committed to assist dental groups interested in providing assistance to marginalized populations regardless of their religious or political beliefs, or economic or social circumstance. If you are interested in coordinating a dental mission trip somewhere in the world, contact the society through its website at www.thedentalmissionsociety.com.
Graduate research across the disciplines

By Terry Wintonyk

The UBC Faculty of Dentistry offers clinical specialty graduate programs in endodontics, orthodontics, pediatric dentistry, periodontics, and prosthodontics, as well as the non-clinical graduate programs in basic craniofacial science. All graduate programs require students to produce original research for an MSc or PhD thesis. The research is wide ranging, varying from molecular biology to social science.

Graduate dentistry students were co-authors of papers published last year in various basic science and clinical publications such as Archives of Oral Biology, Gerodontology, International Endodontic Journal, Journal of Cell Science, Journal of Community Health, and Journal of Dental Education. The following photos show some of these young dental professionals in their new roles as research investigators.

Lubna Alkadi, graduate prosthodontics student, received her Bachelor of Dental Surgery from King Saud University, Riyadh, Saudi Arabia, in 2010. Lubna uses the meticulous triangular prism specimen fracture toughness test, developed at UBC by N. Dorin Ruse, to characterize ceramics used in computer-aided design and manufacture. Lubna presented her work at the 2013 International Association of Dental Research meeting in Seattle, Washington.

Faranak Zaeimdar, graduate periodontics student, received her Doctor of Dental Medicine from UBC in 2011. She prepares specimens to be used in a fracture mechanics characterization of soft and hard palate anatomy. The software she is using was originally developed in Virginia M. Diewert’s lab at UBC.

Rana Tarzemany, graduate periodontics student, received her Doctor of Dental Surgery from the Islamic Azad University Dental School, Tehran, Iran, in 2009. She is culturing human bioreactors for her studies on the role of connectives in regulating bone forming and bone remodeling. Rana won a Canadian Institutes of Health Research Graduate Student Travel Award to attend the 2013 International Association of Dental Research meeting in Seattle, Washington. She also won a PhD student award in the 2013 UBC Dentistry Research Day poster competition.

Angela Wong, graduate prosthodontics student, received her Doctor of Dental Surgery from the University of Alberta in Edmonton in 2010. Angela is performing research on the impact of different surface topographies on tissue response. She presented her work at the 2013 International Association of Dental Research meeting in Seattle, Washington.

Shannon Wolkin, graduate student, craniofacial science, received her Bachelor of Science in Dental Hygiene from UBC in 2010. Here, Shannon ambos, focused on a project for the purpose of developing a tool for formative program evaluation in Canadian dental hygiene programs.

Faranak Zaeimdar, graduate periodontics student, received her Doctor of Dental Medicine from UBC in 2011. She prepares specimens to be used in a fracture mechanics characterization of soft and hard palate anatomy. The software she is using was originally developed in Virginia M. Diewert’s lab at UBC.

Marina Braniste, graduate endodontics student, received her Doctor of Dental Medicine from the University of Montreal in 2009. Marina places posts based on root filling material into an extraction socket. Her research measured root canal obturation in teeth that were in contact with each other. She presented her work at the 2013 International Association of Endodontists meeting in Edmonton, and in April at a meeting of the American Association of Endodontists in Honolulu.

Mazen Alotaibi, graduate periodontics student, received his Bachelor of Dental Surgery from King Saud University, Riyadh, Saudi Arabia, in 2010. Mazen is studying the role of periodontal pathogens on bone remodeling in mice. Mazen presented his work at the 2013 International Association of Dental Research meeting in Seattle, Washington, and won a PhD student award in the 2013 UBC Dentistry Research Day poster competition.

Marina Braniste, graduate endodontics student, received her Doctor of Dental Medicine from the University of Montreal in 2009. Marina places posts based on root filling material into an extraction socket. Her research measured root canal obturation in teeth that were in contact with each other. She presented her work at the 2013 International Association of Endodontists meeting in Edmonton, and in April at a meeting of the American Association of Endodontists in Honolulu.

Mazen Alotaibi, graduate periodontics student, received his Bachelor of Dental Surgery from King Saud University, Riyadh, Saudi Arabia, in 2010. Mazen is studying the role of periodontal pathogens on bone remodeling in mice. Mazen presented his work at the 2013 International Association of Dental Research meeting in Seattle, Washington, and won a PhD student award in the 2013 UBC Dentistry Research Day poster competition.

Rana Tarzemany, graduate periodontics student, received her Doctor of Dental Surgery from the Islamic Azad University Dental School, Tehran, Iran, in 2009. She is culturing human bioreactors for her studies on the role of connectives in regulating bone forming and bone remodeling. Rana won a Canadian Institutes of Health Research Graduate Student Travel Award to attend the 2013 International Association of Dental Research meeting in Seattle, Washington. She also won a PhD student award in the 2013 UBC Dentistry Research Day poster competition.

Ubc Dentistry offers clinical specialty graduate programs in endodontics, orthodontics, pediatric dentistry, periodontics, and prosthodontics, as well as the non-clinical graduate programs in basic craniofacial science. All graduate programs require students to produce original research for an Msc or Phd thesis. The research is wide ranging, varying from molecular biology to social science.

Graduate dentistry students were co-authors of papers published last year in various basic science and clinical publications such as Archives of Oral Biology, Gerodontology, International Endodontic Journal, Journal of Cell Science, Journal of Community Health, and Journal of Dental Education. The following photos show some of these young dental professionals in their new roles as research investigators.

Lubna Alkadi, graduate prosthodontics student, received her Bachelor of Dental Surgery from King Saud University, Riyadh, Saudi Arabia, in 2010. Lubna uses the meticulous triangular prism specimen fracture toughness test, developed at UBC by N. Dorin Ruse, to characterize ceramics used in computer-aided design and manufacture. Lubna presented her work at the 2013 International Association of Dental Research meeting in Seattle, Washington.

Faranak Zaeimdar, graduate periodontics student, received her Doctor of Dental Medicine from UBC in 2011. She prepares specimens to be used in a fracture mechanics characterization of soft and hard palate anatomy. The software she is using was originally developed in Virginia M. Diewert’s lab at UBC.

Rana Tarzemany, graduate periodontics student, received her Doctor of Dental Surgery from the Islamic Azad University Dental School, Tehran, Iran, in 2009. She is culturing human bioreactors for her studies on the role of connectives in regulating bone forming and bone remodeling. Rana won a Canadian Institutes of Health Research Graduate Student Travel Award to attend the 2013 International Association of Dental Research meeting in Seattle, Washington. She also won a PhD student award in the 2013 UBC Dentistry Research Day poster competition.

Angela Wong, graduate prosthodontics student, received her Doctor of Dental Surgery from the University of Alberta in Edmonton in 2010. Angela is performing research on the impact of different surface topographies on tissue response. She presented her work at the 2013 International Association of Dental Research meeting in Seattle, Washington.

Shannon Wolkin, graduate student, craniofacial science, received her Bachelor of Science in Dental Hygiene from UBC in 2010. Here, Shannon a mos, focused on a project for the purpose of developing a tool for formative program evaluation in Canadian dental hygiene programs.

Faranak Zaeimdar, graduate periodontics student, received her Doctor of Dental Medicine from UBC in 2011. She prepares specimens to be used in a fracture mechanics characterization of soft and hard palate anatomy. The software she is using was originally developed in Virginia M. Diewert’s lab at UBC.

Marina Braniste, graduate endodontics student, received her Doctor of Dental Medicine from the University of Montreal in 2009. Marina places posts based on root filling material into an extraction socket. Her research measured root canal obturation in teeth that were in contact with each other. She presented her work at the 2013 International Association of Endodontists meeting in Edmonton, and in April at a meeting of the American Association of Endodontists in Honolulu.

Mazen Alotaibi, graduate periodontics student, received his Bachelor of Dental Surgery from King Saud University, Riyadh, Saudi Arabia, in 2010. Mazen is studying the role of periodontal pathogens on bone remodeling in mice. Mazen presented his work at the 2013 International Association of Dental Research meeting in Seattle, Washington, and won a PhD student award in the 2013 UBC Dentistry Research Day poster competition.

Rana Tarzemany, graduate periodontics student, received her Doctor of Dental Surgery from the Islamic Azad University Dental School, Tehran, Iran, in 2009. She is culturing human bioreactors for her studies on the role of connectives in regulating bone forming and bone remodeling. Rana won a Canadian Institutes of Health Research Graduate Student Travel Award to attend the 2013 International Association of Dental Research meeting in Seattle, Washington. She also won a PhD student award in the 2013 UBC Dentistry Research Day poster competition.

Individual student research projects cost between $5,000 and $10,000, and this research relies on funding from sources outside the regular program budgets. To ensure continuing support for the outstanding academic work of its graduate students, UBC Dentistry is building a new, dedicated fund: The Graduate Program Research Fund. A gift to the Graduate Program Research Fund not only supports individual graduate research projects, but also helps the Faculty advance the practice of dentistry in British Columbia to the cutting edge of the discipline.

Your very welcome gift of support for graduate research may be specified for either basic science or for use in one or more of the following clinical specialty graduate programs: Endodontics Orthodontics Pediatric Dentistry Periodontics Prosthodontics

For further information about a gift to UBC Dentistry’s Graduate Program Research Fund, contact Jane Merling at 604-822-5886 or merling@dentistry.ubc.ca
UBC Dentistry’s five clinical specialty graduate programs—endodontics, pediatric dentistry, periodontics, prosthodontics and orthodontics—are grounded in an integrated educational model. This model shapes students—and future dental professionals—who are better able to serve patients with more complex case needs.

Patients who come to UBC Dentistry’s clinic often present with multiple diseases and problems—and most of these patients have limited means. It is quite common that a pediatric dentistry patient also needs orthodontics, or a periodontics case may require an endodontic component in the treatment plan.

A patient recently seen by graduate prosthodontics student Dr. Jonathan Ng, for example, required orthodontics, periodontal grafting, implant surgery and endodontic treatment in addition to complex prosthodontic rehabilitation with crowns, bridges and veneers. Only an interdisciplinary approach would achieve a total aesthetic and functional restoration for this patient.

Ng cites the clinical collaboration, through interdisciplinary treatment seminars and clinical case discussions, as key to developing and delivering treatment for these patients with complex needs. “There is significant benefit from working closely on numerous cases alongside all the specialties,” he says. “It’s a true interdisciplinary experience, one that brings treatment planning and treatment delivery together. UBC offers a unique learning experience.”

Dr. Edward Putnins, associate dean, Research, Graduate & Postgraduate Studies, notes: “Our approach of integrating all grad students through shared common experience rather than by discipline is reflected in our evolving architecture.” In the new Graduate Student Commons on the first floor of the John B. Macdonald Building, students make use of dedicated seminar rooms for multidisciplinary treatment planning. Common study, kitchen and relaxation areas are designed to facilitate spontaneous interaction and debriefing among graduate students of all disciplines.

There is, however, one core project remaining to complete the fully envisioned integrated model: the Graduate Specialty Clinic.

Currently the graduate programs operate out of UBC Dentistry’s main clinic, the Nobel Biocare Oral Health Centre. But, as Dr. Andrea Esteves, associate dean, Clinical Affairs, points out, in recent years the Faculty has grown from offering two graduate specialty programs to five. Five programs translates to approximately 46 graduate students to incorporate among the operatories, which are designed to accommodate, for the most part, the four classes of students in the undergraduate dentistry program.

“While we are operating quite well at full capacity,” Esteves says, “a new graduate specialty clinic would complete the integrated educational model by enabling a more flexible clinic schedule. This would increase interaction among grad students and allow them to attend to more of our patients.” Esteves also notes that a dedicated clinic for the specialties would have the specific technologies needed for the various specialties—whereas adding such technologies into the footprint of the existing clinic would be difficult and very costly.

Creating an environment in which specialists treat patients and learn in close proximity to each other produces a generation of specialists with an expanded scope of knowledge and installs a professional interaction model not managing their own complex cases in future private practice.

Patients with complex needs who are managed in this model will benefit by having input from multiple specialists who are readily accessible, which will help ensure that the best treatment can be delivered in a timely fashion.

So what is the holdback to building a graduate specialty clinic?

“Financial support,” explains Putnins. “We want to engage the external professional communities to help build the graduate clinic, which in the long run supports the education of the next generation of specialists, and more immediately supports patients—those who wouldn’t otherwise receive the complex treatment required.”

The space exists, Putnins says, pointing to the original clinic in the John B. Macdonald Building. Decommissioned in 2006, the old clinic has been stripped of its outdated and ailing infrastructure and has sat idle. Having space at UBC is a double-edged sword—a luxury to possess, but a financial challenge to renovate. The university does not financially support these kinds of renovations; the faculty or department must raise the funds.

Several donors have already come forward to financially support UBC Dentistry’s vision for the graduate specialty clinic, but more support is needed.

The plan includes 20 open and closed operatories conducive for the specialties and for patients such as children and seniors, as well as consultation rooms and a conference room. Says Putnins, “We know the architectural elements we need—we’ve done our homework. We just need financial support to build it.”

“We know the architectural elements we need—we’ve done our homework. We just need financial support to build it.”

— Dr. Edward Putnins

UBC Dentistry’s five clinical specialty graduate programs—endodontics, pediatric dentistry, periodontics, prosthodontics and orthodontics—are grounded in an integrated educational model. This model shapes students—and future dental professionals—who are better able to serve patients with more complex case needs.

Patients who come to UBC Dentistry’s clinic often present with multiple diseases and problems—and most of these patients have limited means. It is quite common that a pediatric dentistry patient also needs orthodontics, or a periodontics case may require an endodontic component in the treatment plan.

A patient recently seen by graduate prosthodontics student Dr. Jonathan Ng, for example, required orthodontics, periodontal grafting, implant surgery and endodontic treatment in addition to complex prosthodontic rehabilitation with crowns, bridges and veneers. Only an interdisciplinary approach would achieve a total aesthetic and functional restoration for this patient.

Ng cites the clinical collaboration, through interdisciplinary treatment seminars and clinical case discussions, as key to developing and delivering treatment for these patients with complex needs. “There is significant benefit from working closely on numerous cases alongside all the specialties,” he says. “It’s a true interdisciplinary experience, one that brings treatment planning and treatment delivery together. UBC offers a unique learning experience.”

Dr. Edward Putnins, associate dean, Research, Graduate & Postgraduate Studies, notes: “Our approach of integrating all grad students through shared common experience rather than by discipline is reflected in our evolving architecture.” In the new Graduate Student Commons on the first floor of the John B. Macdonald Building, students make use of dedicated seminar rooms for multidisciplinary treatment planning. Common study, kitchen and relaxation areas are designed to facilitate spontaneous interaction and debriefing among graduate students of all disciplines.

There is, however, one core project remaining to complete the fully envisioned integrated model: the Graduate Specialty Clinic.

Currently the graduate programs operate out of UBC Dentistry’s main clinic, the Nobel Biocare Oral Health Centre. But, as Dr. Andrea Esteves, associate dean, Clinical Affairs, points out, in recent years the Faculty has grown from offering two graduate specialty programs to five. Five programs translates to approximately 46 graduate students to incorporate among the operatories, which are designed to accommodate, for the most part, the four classes of students in the undergraduate dentistry program.

“While we are operating quite well at full capacity,” Esteves says, “a new graduate specialty clinic would complete the integrated educational model by enabling a more flexible clinic schedule. This would increase interaction among grad students and allow them to attend to more of our patients.” Esteves also notes that a dedicated clinic for the specialties would have the specific technologies needed for the various specialties—whereas adding such technologies into the footprint of the existing clinic would be difficult and very costly.

Creating an environment in which specialists treat patients and learn in close proximity to each other produces a generation of specialists with an expanded scope of knowledge and installs a professional interaction model not managing their own complex cases in future private practice.

Patients with complex needs who are managed in this model will benefit by having input from multiple specialists who are readily accessible, which will help ensure that the best treatment can be delivered in a timely fashion.

So what is the holdback to building a graduate specialty clinic?

“Financial support,” explains Putnins. “We want to engage the external professional communities to help build the graduate clinic, which in the long run supports the education of the next generation of specialists, and more immediately supports patients—those who wouldn’t otherwise receive the complex treatment required.”

The space exists, Putnins says, pointing to the original clinic in the John B. Macdonald Building. Decommissioned in 2006, the old clinic has been stripped of its outdated and ailing infrastructure and has sat idle. Having space at UBC is a double-edged sword—a luxury to possess, but a financial challenge to renovate. The university does not financially support these kinds of renovations; the faculty or department must raise the funds.

Several donors have already come forward to financially support UBC Dentistry’s vision for the graduate specialty clinic, but more support is needed.

The plan includes 20 open and closed operatories conducive for the specialties and for patients such as children and seniors, as well as consultation rooms and a conference room. Says Putnins, “We know the architectural elements we need—we’ve done our homework. We just need financial support to build it.”
“When I came to BC after completing my degree in Toronto, I was impressed with the progress at UBC Dentistry. I fully support renovating JBM, because it aligns with my values to help future leaders in the dental profession. Building a graduate specialty clinic shows vision and dedication in providing the very best educational experience for students—many of whom I would welcome to join my practice in Abbotsford.”

- Dr. Brad McDonald, Clayburn Dental

“This area [the atrium of the student lounge, with its abundance of natural light and serene atmosphere] helps us to wind down, refocus and to relax. It’s a place where students want to be.”

- Jonathan Hung, former fourth-year DMD student

“The small learning rooms are perfect for our groups. 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. Each room is equipped with the same technology, so all student groups have access to the best possible environment.”

- Amro Foda, former fourth-year DMD student

My history with UBC Dentistry extends nearly three decades, from Dental Undergraduate Society president and editor of the 25th anniversary yearbook, to a proud alumnus and now member of the dean’s Board of Counsellors. I am well acquainted with the old dentistry building, affectionately known as JBM, which is undergoing an enormous transformation.

Dean Shuler, the faculty and staff are to be lauded for their drive and commitment to maintaining UBC Dentistry’s status as a world-class teaching and research facility. The planned renovations of the John B. Macdonald Building will meet the needs of a dental curriculum that is not only current, but visionary. Top-notch facilities attract world-class professors and researchers, who enhance the learning experience for all our students—who are the future of our oral health care profession. Your continuing financial support will make these essential renovations possible!

Richard Busse, DMD 1986

Funds raised to date: $1,849,474

Just over 840 square metres (9,000 sq. ft.) remains of unused or outdated space to convert into modern facilities for teaching, learning, research and service.
**Look How Far We Have Come in 50 Years**

*It is hard to believe that the dental school at UBC will be 50 years old next year. Its growth from just a collection of huts in 1964 to the state-of-the-art facilities that exist today is quite remarkable.*

---

### 1962
- BC Legislature authorizes the establishment of a faculty of dentistry at the University of British Columbia.

### 1964
- Eight students register for the first dental class.

### 1966
- First patients receive treatment from first dental students in a temporary seven-chair clinic housed in trailers.

### 1968
- New dental building opens; named the John Bartlett Macdonald Building.
- Twenty students enroll in the first dental hygiene class.

### 1969
- Doctor of Philosophy in Oral Biology program established.

### 1979
- Over 1,000 people on a waiting list for the dental clinic (provincial economic climate leads to an increase in people seeking treatment).

### 1984
- Research grants received by the Faculty of Dentistry exceed $1 million.

### 1986
- UBC Dentistry services begin in Haida Gwaii (formerly Queen Charlotte Islands); Skeikum Dental Clinic added as a rotation to the GPR Program.

### 1988
- Dr. Paul B. Robertson, 1988 – 1992

### 1990
- Research grants received by the Faculty of Dentistry exceed $2 million.

### 1992
- Dr. George S. Beagrie, 1978 – 1988

### 1994
- Research grants received by the Faculty of Dentistry exceed $1 million.

### 1996
- First dental students in a temporary seven-chair clinic housed in trailers.

### 1997
- Bureau of Legal Dentistry opens; Canada’s first facility devoted exclusively to police work, research and instruction in the use of forensic dentistry for crime investigation and prosecution.

### 1999
- Faculty adopts problem-based learning pedagogy.

### 2000
- Master’s program launches to provide dental services in eight residential care centres; a UBC, Providence Health Care and Vancouver & Richmond Health Board partnership.

### 2002
- UBC Dentistry services begin in Haida Gwaii (formerly Queen Charlotte Islands); Skeikum Dental Clinic added as a rotation to the GPR Program.

### 2003
- Dr. S. Wah Leung, 1962 – 1977

### 2004
- Second international relations program, grown since its ad hoc beginning in the 1980s, coordinates student exchanges with 50 countries on five continents.

### 2006
- Clinical specialty graduate program in endodontics launched.

### 2011
- UBC Dentistry “adopts” an elementary school. A one-chair dental clinic is built in Vancouver’s Florence Nightingale Elementary School; treatment is provided to the children by dentists-residents of the GPR program.

### 2012
- Dr. Marcia A. Boyd (pro tem), 1992 – 1994
- Dr. Charles F. Shuler, 2007 – present

---

### The Deans of UBC Faculty of Dentistry

**Meet the Co-Chairs of Dentistry’s 50th Anniversary Committee**

As an alumnus, it gives me great pride to celebrate this milestone with my colleagues in dentistry. Our profession has evolved significantly over the last few decades, and the dental school has kept abreast of these changes. It is exciting to see that the new graduates are so keen today as we were when we graduated.

Dentistry has been a very good career choice for me, and I welcome the opportunity to pay it forward. It is our responsibility to ensure that the next generation of dentists has the same opportunities that we had.

I have been fortunate to be a part of the planning for the 50th anniversary. There is an incredible team of individuals working on the celebrations, and it is quite evident that it is going to be a year to remember. I encourage all members of the dental profession—especially those who are alumni of UBC Dentistry, dentists and hygienists alike—to mark your calendars and make time in 2014 to attend some of the planned showcase events.

—Ashok Varma, DMD 1983

I am absolutely thrilled and honoured to be a co-chair of the organizing committee for the UBC Faculty of Dentistry’s 50th anniversary celebrations. I have been affiliated with the Faculty for many years, having obtained my dental hygiene diploma in 1976, as well as my bachelor’s degree in 2004 and Master of Science in 2007. My education here has served me very well in my chosen profession of dental hygiene.

The UBC Faculty of Dentistry has come a long way over 50 years, developing into a highly regarded, world-class dental and dental hygiene education and research institution.

There are many opportunities for everyone to participate in this once-in-a-lifetime celebration of excellence. Please consider becoming involved in one of the many exciting events that are planned for you during 2014, our anniversary year.

—Brenda Currie, Dip DH 1976, BDOc 2004, MSc 2007
Ten-year-old Lucy* was extremely self-conscious about a gap in her smile when she first arrived at UBC’s Nobel Biocare Oral Health Centre. The “chief concern”—one of her front teeth was not growing in. After an orthodontic and periodontic assessment, which included a CT scan, the suggested treatment plan was estimated to cost over $5,000—a fee well beyond the means of her mother and father who are both students with three additional children to support. Her father currently works, but his income is barely enough to support his family’s daily needs.

UBC Dentistry’s Community Access Fund provided the funds needed for Lucy to receive the recommended treatment and relieve the family of a hefty financial burden.

Dr. Winnie Zhao, a third-year graduate prosthodontics student, notes that his patient had additional problems: his lower partial denture also lacked retention, and the inadequate anterior-posterior spread of his remaining teeth meant the denture was either too loose, which hurt his issues, or too tight on his abutment teeth. Needless to say, Dr. Thornton determined that, due to these complications, Mr. Brown’s dentures were unacceptable for wear.

Lucy got her smile back thanks to the Community Access Fund. Mr. Brown’s complete upper denture lacked retention and stability, causing a strong gag reflex. This made it difficult for Mr. Brown to tolerate the denture.

Dr. Ian Thornton, a second-year graduate prosthodontics student, notes that his patient had additional problems: his lower partial denture also lacked retention, and the inadequate anterior-posterior spread of his remaining teeth meant the denture was either too loose, which hurt his issues, or too tight on his abutment teeth. Needless to say, Dr. Thornton determined that, due to these complications, Mr. Brown’s dentures were unacceptable for wear.

Sixty-eight-years old and on a fixed income, Mr. Brown could not afford the cost of treatment for his denture issues. Through the Community Access Fund, however, he received the oral health care required, with the added bonus that his overall quality of life improved.

The Community Access Fund, views the effect of her donations. Dr. Chow hopes others will be as excited as she is about the new specialty programs at UBC, and will be inspired to support the fund to help facilitate treatment for more patients with costly dental needs, like Lucy and Mr. Brown.

To learn more about the fund or to make a donation, visit www.dentistry.ubc.ca/go/caf

The ‘Gift of Jade’

Many patients who come to UBC Dentistry face financial hardships that affect the extent of their treatment plan. Frequently, attending students recommend a range of needed procedures, only to discover that the patient cannot afford the full case—even with the rates reduced below the BC Dental Association fee guide. Patients are often left with chronic dental problems, and our students are frustrated at not being able to care for their patients.

Since its inception in August 2011, the Community Access Fund has assisted patients in financial need. A by-product of funding patients for the required dental care is that students will have the educational advantage of being able to follow through on the full treatment plan they have identified for these patients.

A gift to the Community Access Fund provides financial support for patients facing financial hardship, which enables optimal treatment planning, yielding improved long-term outcomes. By assisting these patients financially, the fund ensures that students—graduate and undergraduate—have opportunities to manage comprehensive patient care cases.

“Bringing in the inspired gift of jade by throwing in a piece of brick”—this Chinese saying illustrates how Dr. Susan Chow DMD 1972, a generous supporter of the Community Access Fund, views the effect of her donations. Dr. Chow hopes others will be as excited as she is about the new specialty programs at UBC, and will be inspired to support the fund to help facilitate treatment for more patients with costly dental needs, like Lucy and Mr. Brown.

To learn more about the fund or to make a donation, visit www.dentistry.ubc.ca/go/caf

1970s

The Dip DH Class of 1978 celebrated their 35-year reunion at the 2013 Pacific Dental Conference Annual Alumni Reception. Eleven members of our class reunited at the reception and nine of us went to dinner at Boneta, a restaurant in Gastown, after the reception. It was great to see each other, and we have vowed not to let another 10 years slip by before getting together again.

My wife Robin and I were pleased to host 24 graduates of the DMD Class of 1978 in our home for a homemade buffet dinner following the alumni reception at the Pacific Dental Conference on March 8, 2013. Conversations that night were less about our practices and more about retirement, vacations and families. The evening ended with a delicious updated version of the molar cake we enjoyed following our last day of clinic in 1978. While we had much more hair back then, it was evident we could all still enjoy a few cocktails and have a great time together.

1980s

The Dip DH Class of 1983 celebrated their 30-year reunion on March 8, 2013, at the Pacific Dental Conference. They reminisced that it seemed like only yesterday they were together in the basement of the John B. Macdonald Building. Many laughs were shared, and everyone is excited about the next reunion.

Mike is pleased to announce that his third book, The Basic Rules of Facially Generated Treatment Planning, has just been published. To order the book, contact Palmeri Publishing at www.palmeripublishing.com

Members of the DMD Class of 1983 enjoyed a glass of sparkling wine and then had dinner at MARKET by Jean-Georges, a restaurant in the Shanghai-La Hotel. The chef prepared a delicious four-course tasting menu, and everyone toasted 30 years since dental school.

DMD 1982

Douglas W. Corn

DMD 1983

Mike Rocchi

DMD 1982

Mike has been recognized as an associate fellow of the American Academy of Implant Dentistry.

The Dip DH Class of 1983 celebrated their 30-year reunion on March 8, 2013, at the Pacific Dental Conference. They reminisced that it seemed like only yesterday they were together in the basement of the John B. Macdonald Building. Many laughs were shared, and everyone is excited about the next reunion.

Alan Lau

Brian Standerwick

David Yu

DMD 1988

Part I of the DMD Class of 1988 25-year reunion happened at the Blue Water Cafe + Raw Bar in Yaletown on March 8, 2013. Twenty-nine of the 38 members of our graduating class attended the dinner. Everyone really enjoyed catching up and reminiscing.

REUNION DMD CLASS OF 1988–25-YEAR REUNION PART II

Brian Standerwick, Alan Lau and David Yu are planning a second 25-year reunion for this class in either Whistler or Kelowna. For information, contact Jenn Parsons at 604-822-6751 or alumni@dentistry.ubc.ca

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

PlANNING A REUNION?

Want to know more about the fund or to make a donation, visit www.dentistry.ubc.ca/go/caf

KEEP IN TOUCH

www.dentistry.ubc.ca/alumni

Maria Taylor

Dip DH 1983

DMD 1982

Myrna Pearce

DMD 1985

DMD 1988

DMD 1983

Bill Liang

DMD 1983

Keep in touch

www.dentistry.ubc.ca/alumni

Dental Specialists Society of British Columbia.

Myrna has been recognized as an associate fellow of the American Academy of Implant Dentistry.

DMD 1982

Douglas W. Corn

DMD 1983

Mike Rocchi

DMD 1982

Mike has been recognized as an associate fellow of the American Academy of Implant Dentistry.
1990s

Don Hemmings  
DMD 1993

The DMD Class of 1993 enjoyed a fantastic Italian dinner at La Pentola Dell'a Quercia restaurant in Yaletown following the Annual Alumni Reception at the Pacific Dental Conference. Pictured here are Sandra Shostak and Young Tse Kueh.

Kate Allyson Montague was born one month early on December 20, 2011, at BC Women’s Hospital & Health Centre. After many years of trying to start a family, my husband Brent and I were told it wouldn’t happen. So, we gave up and got a dog—and three weeks later Kate was conceived. Best surprise ever! Kate Allyson Montague was born one month early on February 20, 2012. Keeping to the Laurers’ family profession, his parents predent dental school is around the corner for this little fellow.

2000s

Lisa Reino  
DMD 1993

Five years and almost 30 babies later, the Class of 2008 had a fantastic time reuniting at the Pacific Dental Conference. While we missed the classmate who wasn’t able to make it to Vancouver, we shared many memories and good times, and much laughter, over a great dinner and evening.

Michelle McIntosh  
DMD 1999

Michelle moved back to Alberta and now practices in High River, Alberta. Along with her husband Brad, she is pleased to announce the birth of Elliott Lee McIntosh on February 11, 2013.

2010s

Danielle Woo  
DMD 2008

Immediately following graduation last year, I moved to Port McNeill (a small town in the northern region of Vancouver Island, BC) with my wife Jaylin and three-month-old baby girl Peyton, to associate with David Ban DMD 1980. Over the Christmas holidays, I thought the practice and having been practising solo since January. I have patients from all over the North Island. Being in an isolated community has its pros and cons. On the cons, I get a wide range of situations I can try and deal with, but I have to be very careful because there is no one around to bail me out. I find I am constantly pushing myself. I was overwhelmed leaving dental school and felt it would take years before I got to the point where I could run a practice. I quickly found out, however, that UBC Dentistry gave us a great foundation. When situations arise that I am unsure of, I explain that to the patient and then look to other dental colleagues for advice. Members of the Upper Island Dental Society are on hand by phone. This is the pros side—the dental community has been great and goes above and beyond to help out. Also, being in a small town like this is very satisfying because there is a real need for dental care and everyone is appreciative. And, as a matter of fact from Port McNeill, I can find everything I enjoy doing: fishing, hunting and diving. I can even see my crab traps from my office window! Being from the North Island has been an advantage, as I have hobbies in common with most people in the area.

Sara Gariblynn  
DMD 2012

Kathryn Hunter, Melissa Milligan, Michelle Watabo (all DMD 2012) and I recently travelled to New York City. Our classmate Amro Foda met up with us for a day as he is doing his oral surgery residency in the Bronx, New York City.

2020s

Ryan Lauwers  
DMD 2004

Ryan and Michelle are pleased to announce the birth of Westley Michael Sinden Lauwers. Westley was born on December 19, 2012, at 7:18 a.m. by emergency C-section, 10 weeks early. He spent nine weeks in the neonatal intensive care unit and came home on February 20, 2013. Keeping to the Lauers’ family profession, his parents predent dental school is around the corner for this little fellow.

Brian Bostrom  
DMD 2012

This April, the dental hygiene students organized their first hygiene-only Volunteer Community Clinic at the Abbotsford Food Bank. The clinic was a positive experience for the 12 participating students and two supervising alumni, Jill Moore Dip DH 1981 and Sean Kelly DMD 1995. We got the opportunity to do film radiographs and sterilization on site, with minimal assistance, and were able to stay efficient despite the limited supplies and busy schedule. Everyone voted this as one of the most organized volunteer clinics yet, and we are committed to planning another one for next year.

Almost Alumni

The inaugural Dental Undergraduate Society and alumna wine tasting evening was a great success. Mark Anthony Brands generously sponsored Mission Hill wines. Sinclair Dental and Haburb and Associates were generous sponsors for the event as well.

In Memoriam

Donald B. Neratini  
DMD 1974

We are sad to announce that Don passed away suddenly on February 26, 2013, at the age of 63, while vacationing in the Caribbean. Don was born and raised in Burnaby, BC. He graduated from dental school at UBC in 1974 after seven strenuous years of university. Upon graduation, he decided to leave the stress of the big city by moving to Ucluelet, BC, where he opened the town’s first dental office and met the love of his life, Barbara. Don and Barb moved to Campbell River in 1976, where they opened another dental office. They spent years travelling to Port McNeill and Ucluelet, providing dentistry to ensure adequate income for their family. Hard work and family were two of Don’s biggest values. At age 54, Don was forced to take an early retirement and was thankfully able to enjoy these last years. He always looked forward to family camping trips and fishing. Working in his vegetable garden was a passion, and a tradition that Don’s daughters will continue. He was an avid member of the Campbell River gun club and competed in IPSC shooting. Don also loved riding his Harley with Barb in the local toy and poker runs, as well as driving his precious ’66 Corvette. He will be missed by many, but we can all feel confident in the fact that Don lived well until his last moment.

Ambran Khan  
BDSc 2013

The 2013 International Dental Student Convention happened from January 17 to 20, 2013, at Fairmont The Queen Elizabeth in Montreal. Selected third- and fourth-year UBC Dentistry DMD students joined 837 students from other Canadian dental schools for a weekend of activities, including lectures, exhibits and a fashion show. Thank you to MediCapital Bank for their support. Pictured here from left to right holding Graeme Scott (MediCapital Bank): Karlin Ems DMD 2013, Steven Huang DMD 2014, Whitney Weissbach DMD 2013, Sumpreet Bains-Dahia DMD 2013, Jay Chan EMD 2013 and David Chen DMD 2014.

Joclyn Shih  
DMD 2015

In February, alumni gathered on the beach in Hawaii to earn their continuing education credits in the sun.

Recent Events

Adventure and Learn Hawaii 2012

In February, alumni gathered on the beach in Hawaii to earn their continuing education credits in the sun.

Young Alumni & Student Reception at the Pacific Dental Conference 2013

In March, young alumni enjoyed a beer with the current third- and fourth-year students following the Pacific Dental Conference. Thank you to Mahoney & Sons-Burrard Landing, Sinclair Dental and Scotiabank for sponsoring the event.
So join now! Alumni at standerwick@telus.net to join the alumni team. We need all the help we can get—

On March 10, 2013, the students dominated over the alumni in the annual UBC Dentistry Alumni vs. Students Hockey Game. This year, the theme of the reception was “Cinque de Soleil” and the winner of the trip to see O at The Bellagio Hotel in Las Vegas was Gurjit Gakhal DMD 2004. The trip was generously sponsored by Nadean Burkett & Associates. Thank you also to the other alumni partners who support this event each year: Advil, Scotiabank, Sinclair Dental, Aurum Ceramic, and Nadean Burkett & Associates. Mark your calendars for Friday, March 7, 2014, for the next alumni reception. The Faculty of Dentistry celebrates its 50th Anniversary in 2014.

**Events for Students and Alumni**

**ANNUAL ALUMNI & FRIENDS GOLF TOURNAMENT**
Sunday, September 15, 2013 - 1 pm (shotgun start)
Morgan Creek Golf & Country Club, Surrey, BC
For more information and to reserve your foursome for this sell-out event, contact Jenn Parsons at alumni@dentistry.ubc.ca

**TASTE OF VANCOUVER ISLAND, VICTORIA**
Saturday, October 19, 2013 - 4 - 6 pm
Join Dr. Charles Shuler, dean of UBC Dentistry, and fellow Victoria & District Dental Society alumni and friends at a reception featuring local foods, cocktalis and BC wine. The event location is to be announced. For more information, email alumni@dentistry.ubc.ca.

**ALUMNI WINE RECEPTION AT THE TODS MEETING, KELOWNA**
Friday, October 25, 2013
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 2013 Thompson Okanagan Dental Society (TODS) annual meeting. Conference registration is not required to attend the reception. For conference registration, go to www.todsmeeting.com. For information about the reception, email alumni@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.

Stay connected to more than 2,400 alumni. Share your news, thoughts or comments. Visit www.dentistry.ubc.ca/alumni

**More Events for Alumni**

**ANNUAL ALUMNI & FRIENDS GOLF TOURNAMENT**
Sunday, September 15, 2013 - 1 pm (shotgun start)
Morgan Creek Golf & Country Club, Surrey, BC
For more information and to reserve your foursome for this sell-out event, contact Jenn Parsons at alumni@dentistry.ubc.ca

**VOLUNTEER COMMUNITY CLINICS—UPCOMING**
H’lul’ut’en Health Society (Cherumsus) July 18 - 21, 2013
Vancouver Native Health Society (Vancouver) August 24, 2013
Volunteer supervising dentists and dental hygienists can get updates at www.dentistry.ubc.ca/vcp

**ALUMNI PUB NIGHT, CALGARY**
Friday, November 15, 2013 - 4 pm
Ceil’s Irish Pub and Restaurant 351 4th Avenue SW, Calgary, Alberta
Join Dr. Charles Shuler, dean of UBC Dentistry, and fellow Calgary & District Dental Society alumni and friends for a beer and snacks. Thank you to Dentsply for sponsoring this event. For information, please email alumni@dentistry.ubc.ca.

**Open Wide Community Clinic Day**
Saturday, September 14, 2013 CDI College, Burnaby, BC
UBC Dentistry alumni and the British Columbia Dental Association have teamed up to deliver free dentistry and dental hygiene in Burnaby at CDI College. The clinic will offer basic dental care to the clients of a local social agency. For more information on volunteering for this community clinic, email Jenn Parsons at alumni@dentistry.ubc.ca.

**MENTORSHIP PROGRAMS**
The UBC Faculty of Dentistry & BC Dental Association have teamed up to deliver free dentistry and dental hygiene in Burnaby at CDI College. The clinic will offer basic dental care to the clients of a local social agency. For more information on volunteering for this community clinic, email Jenn Parsons at alumni@dentistry.ubc.ca.

**UBC DENTISTRY 50TH ANNIVERSARY WEEKEND**
September 19 - 21, 2014
Celebrating 50 years of the Faculty of Dentistry at UBC

**UBC DENTISTRY RESEARCH DAY 2014**
Tuesday, January 28, 2014
Showcasing alumni research over 50 years

**PACIFIC DENTAL CONFERENCE 2014**
March 6 - 8, 2014
Honouring 50 years of UBC Dentistry

**UBC DENTISTRY ANNUAL ALUMNI & FRIENDS GOLF TOURNAMENT**
Sunday, September 21, 2014 · 1 pm
Morgan Creek Golf & Country Club, Surrey, BC
For more information and to reserve your foursome for this sell-out event, contact Jenn Parsons at alumni@dentistry.ubc.ca

**UBC DENTISTRY 50TH ANNIVERSARY CELEBRATION EVENTS AND DATES**

**November 15, 2013**
Alumni Pub Night, Calgary

**February 14, 2014**
UBC Dentistry Alumni Weekend, Kelowna

**May 10, 2014**
BC Dental Association Awards

**March 6 – 8, 2014**
PACIFIC DENTAL CONFERENCE 2014

**September 19 – 21, 2014**
UBC DENTISTRY 50TH ANNIVERSARY WEEKEND

**2014 CELEBRATION EVENTS AND DATES**

**September 5, 2014**
C. V. Gordon Dental Laboratory and Exhibition Centre, Vancouver

**September 16, 2014**
Second Floor Lobby, Vancouver Convention and Exhibition Centre

**October 16, 2014**
Ceili’s Irish Pub and Restaurant 351 4th Avenue SW, Calgary, Alberta
Join Dr. Charles Shuler, dean of UBC Dentistry, and fellow Calgary & District Dental Society alumni and friends for a beer and snacks. Thank you to Dentsply for sponsoring this event. For information, please email alumni@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.

Stay connected to more than 2,400 alumni. Share your news, thoughts or comments. Visit www.dentistry.ubc.ca/alumni

**Did you know?**
By volunteering at the clinic you can help provide free dentistry and dental hygiene to the clients of a local social agency. For more information on volunteering for this community clinic, email Jenn Parsons at alumni@dentistry.ubc.ca.

Alumni and friends are invited to attend the Spring Alumni Meeting at UBC’s Doug Mitchell Thunderbird Sports Centre. The score was 6 to 1 for the students. Email Brian Standerwick DMD 1988 at standerwick@telus.net to join the alumni team. We need all the help we can get—so join now!