



# Dental Bites

October 2012

## City Council Passes Fluoride Bill

*In mid-September, the Portland City Council unanimously approved adding fluoride to the city's drinking water. Portland was the largest U.S. city without fluoridation. "I completely support this wise decision," said Community Dentistry Chair Eli Schwarz, D.D.S., M.P.H., Ph.D., who testified at a council hearing (Interim Dean Gary Chiodo, D.M.D. '78, F.A.C.D. also provided written testimony). I think the council is courageous and forward thinking in terms of this important public*  
*(continued on page five)*

## Director Named for GPR Program

**Sean Benson**, D.D.S., a former Oregon Dental Association president who has been practicing in Baker City, Ore., has been named director of the school's new General Practice Residency (GPR) program. Dr. Benson joins the school this month in his new role.

"Dr. Benson comes with a vision for an outstanding GPR program and we are extremely fortunate to have him on our team," said Interim Dean **Gary Chiodo**, D.M.D. '78, F.A.C.D. "While there are still many outstanding questions for the GPR such as whether it's a one or two-year program, how many residents, and how the hospital-based program will integrate within the new school building, we liked that Dr. Benson has been thinking about all of these details. He will lead the decision-making process and finalize the details, as well as oversee the administration of the program."

The first residents of the GPR are anticipated to join *(continued, right column)*

the school in fall of 2014, in time for the opening of the school's new building. The program will be located within Hatfield Research Center on Marquam Hill, right next to the oral and maxillofacial surgery clinic.



Sean Benson

Funds acquired through a \$1 million anonymous grant and a grant from Kaiser Permanente will help outfit the new GPR hospital space and provide start-up funds for the program's first year. **Ron Sakaguchi**, D.D.S., Ph.D., M.B.A., has been helping with financial models for the GPR. **Tom Hilton**, D.M.D., M.S. Biomaterials and Biomechanics '96, alumni centennial professor of operative dentistry, and Dean Emeritus **Jack Clinton**, D.M.D. '64, also have been instrumental in the GPR planning. *(continued on page three)*

## New Research Grants for SOD Faculty

Despite the decline nationally in NIH funding, OHSU School of Dentistry faculty have recently received a number of new grants.

First, **David Morton**, Ph.D., professor and associate dean for research, has received renewal on a grant now in its 21<sup>st</sup> continuously funded year. The four-year grant is for almost \$1.2 million and is from the National Institutes of Health's National Institute of General Medical Sciences.

Given the decline in NIH funding in recent years, Dr. Morton said he is particularly gratified to receive funding for basic science rather than a specific disease. The grant will enable Dr. Morton and his team to continue studying cyclic GMP (or cGMP), an intracellular chemical messenger present in almost all cells, in all organisms therefore, any defects in signaling can manifest in *(continued on page four)*

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## Missions and Programs Update at Faculty Conference

Interprofessional education, clinic enhancement, and research stimulation all were topics at the September faculty conference, which was attended by about 85 full and part-time faculty. OHSU provost **Jeanette Mladenovic**, M.D., M.B.A., also updated faculty on various initiatives.

Interprofessional education is a major agenda item at OHSU, said Interim Dean **Gary Chiodo**, D.M.D. '78, F.A.C.D., and will have a substantial effect on how basic science education is delivered as well as ethics, professionalism, and holistic patient care education. It also harmonizes with the current coordinated care organization model, he said.

"Our triple aim is to lower the cost of health care, provide a better experience for patients, and have better outcomes for the population's health overall," said Dr. Chiodo. "Not only will interprofessional education help us take better care of patients, it will be a more satisfying way of practicing dentistry."

An OHSU steering committee has been formed by the provost's office to discuss interprofessional education and **Jeffrey Stewart**, D.D.S., associate professor of pathology, is the dental school representative.

Dr. Mladenovic invited faculty to volunteer for any one of four task forces under the interprofessional education steering committee umbrella. They include: transprofessional education, learning environment, classic IPE, and professional identity. Interested faculty can email the provost's office.

One of the first steps to further implementation of interprofessional education has been the coalescing of 17 different academic calendars university-wide, and this may be a challenge come summer of 2013, said **Phyllis Beemsterboer**, M.S., Ed.D., associate dean for academic affairs.

"Our summer session may extend from eight weeks, but we just don't know yet," she said. "We will likely keep our 12-week calendar for fall, winter, and spring, but what is packaged in there may be different so we ask that faculty remain flexible as any changes are implemented."

Patient care is another core mission area and Dr. Chiodo said he believes OHSU dental students continue to receive the best education and pre-doctoral clinic experience in the nation. To keep the trend going, he said, additional clinical resources have been allocated to ensure that when entering class sizes go up by 15 in the new building, the school is ready. Six new clinical faculty are being hired (see page one of the September *Dental Bites*) and the General Practice Residency is getting off the ground (see page one). The AEGD (Advanced Education in General Dentistry) program is moving forward with a request for a planning grant from Kaiser Permanente. The integrated group practice structure in the pre-doctoral clinic is celebrating five years of success and a review team has been appointed to reflect on accomplishments and any new directions. And there has been a push over the last six months to increase enrollment within the Faculty Dental Practice (FDP).

"Sinking enrollment in the Faculty Dental Practice the past few years causes me a great deal of heartache," said Dr. Chiodo.

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## Back-to-School weekend



**September was a busy month for alumni with the Cantwell Memorial Golf Tournament on Sept. 21 and the Cantwell Memorial Lecture/Margaret M. Ryan Dental Hygiene Update on Sept. 22. About 135 alumni, staff, faculty, students, and friends played in the Cantwell Memorial Golf Tournament at Langdon Farms. The matching foursome shown above, which included (left to right) SOD Development Director Pat Regan; Steve Beadnell, D.M.D. '80; associate professor of oral and maxillofacial surgery; Jeff Van Orman, D.M.D. '97; and David Kreutzer, D.M.D. '00, assistant professor of endodontology, placed in the top 10. Dr. Beadnell was the guest lecturer for the Cantwell lecture, which was attended by more than 110 alumni and friends. (Photo Mark Kemball)**

### **GPR** *(continued from page one)*

Dr. Benson received his doctor of dental surgery at The Ohio State University in 1998, and then he completed a two-year general practice residency there.

He is on the Oregon Dental Association's board of trustees and its executive committee. Dr. Benson participated on the school's Blue Ribbon panel two years ago, which gave the green light for a new dental school building.

## School Budget Presented

OHSU School of Dentistry's budget is \$35.5 million for fiscal year 2013, said Interim Dean **Gary Chiodo**, D.M.D. '78, F.A.C.D., and several plans are in the works to ensure the school remains on firm financial footing. Dr. Chiodo presented the budget during the fall faculty conference in September.

Nearly \$15 million (42 percent) of the FY 2012 budget came from tuition; more than \$11 million (32 percent) was from clinic revenue; nearly \$5 million (14 percent) was from state funding; and the rest came from other sources including grants/contracts, foundation, student issue, etc.

Key school expenses this year (FY 2013) include payroll (56 percent); services/supplies (20 percent); and Overhead Cost Allocation (20 percent), which includes the dental school share of OHSU services including space, information technology, maintenance, insurance, etc.

With the school's move to the new building in less than two years, Dr. Chiodo said he anticipates OCA costs more than doubling, and he is hoping to increase clinic numbers (see story, page one) to keep the school's budget balanced.

Several unique preliminary proposals are in the works with the Oregon state legislature to help reduce student debt.

OHSU has made a 2013-2015 biennium budget request for a \$2.98 million Tuition Stabilization Program that would cap the annual dental school tuition increase at four percent for the next two years.

"Tuition has hit a tipping point," said Dr. Chiodo. "It has increased significantly the last two years. Receiving funding from the legislature to cap tuition would help to mitigate new increases."

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## New Grants *(continued from page one)*

a wide variety of diseases and disorders. For example, cGMP is the primary signal in photoreceptors underlying people's ability to sense light and mutations in the enzymes that synthesize cGMP lead to an inherited form of blindness. cGMP is also critical, he said, in vascular tissue mediating dilation of blood vessels and a variety of drugs targeting cGMP metabolism are used to treat heart disease and high blood pressure.

"All of the components of the cGMP signaling pathway are also highly expressed in the brain, but specific roles in nervous tissue have been harder to identify," said Dr. Morton. "This has been the major focus of my research since I started my postdoctoral work in 1983.



*David Morton*

"The last several years we have been bringing the powerful genetic tools available in the fruit fly to better understand this enigmatic signaling system," he said. "A few years ago we discovered that the fruit fly larvae use cGMP signaling to detect changes in oxygen levels in their environment, and a major focus of the current grant is to understand the spatial and temporal dynamics of cGMP signaling in the sensory neurons that detect oxygen levels."

Another new grant has been received by **Jack Ferracane**, Ph.D., chair of restorative dentistry and division director of biomaterials and biomechanics, **Tom Hilton**, D.M.D., M.S. Biomaterials and Biomechanics '96, alumni centennial professor of operative dentistry, and **John Mitchell**, Ph.D., professor of restorative dentistry. The three recently received an administrative supplemental grant from the National Institutes of Health's National Institute for Dental and Craniofacial Research (NIDCR).

The two year, \$550,000 grant, was submitted as a supplement to a currently-funded NIDCR grant entitled "Effect of Bacteria and Mechanical Loading on Degradation of the Composite-Tooth Interface." The new supplemental grant will enable three School of Dentistry researchers to pursue a mechanistic approach to the cariogenic disease process by studying, at the genomic/proteomic level, the response of bacteria *S. mutans* and *S. sobrinus*, to the environment and conditions at the composite/tooth interface. The investigators are **Kirsten Lampi**, Ph.D. '93, professor of integrative biosciences, **Curt Machida**, Ph.D. '82, professor of integrative biosciences and pediatric dentistry, and **Tom Shearer**, Ph.D., professor of integrative biosciences.

Dr. Ferracane said the original grant proposed the development of an innovative recurrent caries model for studying cariogenic disease. It is focused on the final outcome of the bacterial response, which is the colonization of tooth and restorative surfaces with subsequent dentin demineralization, and the potential to inhibit demineralization through modification of the composite.

"The supplement allows us to expand the study aim and probe the activity of the bacteria responsible for caries at the molecular level," he said.

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## School Calendar

- Oct. 12** DS1 Welcome Dinner, 3 p.m., second floor lounge
- Oct. 13** Dean's Gold Circle (Invitation only)
- Oct. 18** Alumni and friends reception at the ADA Annual Session, 6 p.m. Call (503) 552-0745 to register.
- Oct. 22-25** Annual Fall Phonathon. Volunteers needed! Call (503) 412-6377 to register.

## Fluoride *(continued from page one)*

health issue." Dr. Schwarz said he hopes the council will set aside resources for evaluating the health benefits of fluoride from when it is implemented over the next few years. "This will provide the strongest piece of evidence for any future decision on adjustment of the fluoride content in the drinking water," he said.

## New Building Progress



**The OHSU/OUS Collaborative Life Sciences is coming along!** The North Tower (left) which will house the OHSU School of Dentistry come fall of 2014, is being prepped for the start of the eighth floor and is scheduled to top out (12 floors) in mid-December. In addition, the skin for the North Tower began going up last month. The South Tower, on the far right, topped out in mid-September and will be roofed this month. (Photo Sydney Clevenger)

## New Grants *(continued from page four)*

A third recent grant was awarded to **David Covell Jr.**, D.D.S., Ph.D., associate professor and chair of orthodontics, who received the first installment from the American Association of Orthodontists Foundation (AAOF) for a \$50,000, two-year project to digitize growth study radiographs that date from the 1950's.

Dr. Covell said OHSU School of Dentistry currently has one of the largest growth study collections in existence. The collection at OHSU is from the Oregon Child Study Clinic, active from the 1950's through 1970's and funded by the National Institutes of Health. A series of records, similar to ones typically obtained for orthodontic patients, were collected from more than 400 growing individuals. When study participants were recalled annually, facial and dental photographs, dental casts, intra- and extra-oral radiographs and other records were obtained. For some individuals the series of records spans nearly 20 years!

"With current knowledge and concerns about radiation exposure, such records involving people not receiving treatment can no longer be made, thus the collections are irreplaceable," said Dr. Covell. "The AAOF has provided funding for eight collections to pool their records and to make them accessible for teaching and research purposes at [www.aaoflegacycollection.org](http://www.aaoflegacycollection.org). The records are being widely used by researchers in orthodontics, craniofacial growth, and anthropology."

**Jennifer Crowe**, D.D.S., Orthodontics '09, adjunct assistant professor of orthodontics, **Larry Doyle**, D.D.S., Orthodontics '79, assistant professor of orthodontics, and Dr. Covell are coordinating the scanning of lateral cephalograms and other radiographs for submission to AAOF website. Much of the scanning has been done by **Alex Vo**, D.M.D. '12. The grant is for a total of 80 subjects from the Oregon Child Study Clinic growth study. *(continued on page six)*

## Balkowiec Lab to Publish

Researchers in the lab of **Agnieszka Balkowiec**, Ph.D., associate professor of integrative biosciences, OHSU School of Dentistry, have made an important connection between a molecule critical to nerve cells and high blood pressure. Production of the molecule, Brain-Derived Neurotrophic Factor (BDNF), appears to increase dramatically in blood pressure-sensing nerve cells during hypertension. The study, which will appear in the October *Journal of Neuroscience Research*, may someday have implications for the prevention and treatment of high blood pressure.

High blood pressure affects about one in three adults in the United States.

BDNF is essential to the normal development and plasticity of nerve cells, said Dr. Balkowiec. Using two distinct hypertensive animal models, the data suggest a direct role of BDNF in regulation of blood pressure.

"We are now able to knock down BDNF in the blood pressure control system and can move toward answering the next critical question, which is whether BDNF contributes to the development of hypertension, or whether it provides a compensatory mechanism counteracting those that lead to hypertension," said Dr. Balkowiec.

For the study, Dr. Balkowiec paired with **Virginia Brooks**, Ph.D., School of Medicine. Additional authors include: **Anke Vermehren-Schmaedick**, Ph.D.; **Victoria K. Jensen**, B.A.; **Hui-ya Hsieh**, B.S.; **Alexandra Brown**, and **Mollie P. Page**, B.S.

The research was supported by the American Heart Association, Medical Research Foundation of Oregon, and the NIH's National Heart, Lung, and Blood Institute.

## School Budget *(continued from page three)*

"We want to support schools to help their students," said OHSU Provost **Jeanette Mladenovic**, M.D., M.B.A.

Dr. Chiodo also discussed underrepresented minority graduates and said the dental school is doing a great job of attracting minority applicants, but that those students often select other universities with large diversity scholarships available. "We need to find a way to not just attract interested minorities, but to get them to matriculate here," he said.

Dr. Mladenovic noted that diversity is another "serious issue" within the provost's office and that dollars have been allocated for recruitment, including some for the dental school. A system of tracking OHSU scholarship dollars also has been initiated within the Foundation.

## New Grants *(continued from page five)*

"Efforts for creating the Oregon Child Study Clinic were encouraged by then-Dean **Harold Noyes**, D.D.S.," said Dr. Covell, "The project was meticulously supervised by faculty members **Bhim Savara**, D.M.D. '57 (who died in 1987), and **John Schilke**, M.D. "We are fortunate to have access to these unique sets of records that are among the most complete of 12 known collections in North America."

Lastly, **Carmem Pfeifer**, D.D.S., Ph.D., assistant professor of restorative dentistry, has received a one-year, \$40,000 Early Career Investigator award from the Medical Research Foundation of Oregon. Dr. Pfeifer's project deals with the synthesis of new and improved adhesive systems based on riboflavin, to reinforce the dentin substrate and ultimately lead to better long-term stability of the bond between the restoration and the tooth. She said the main goal of the study is to decrease the incidence of secondary decay due to marginal degradation, and to decrease the number of reinterventions. Drs. Mitchell and Lampi will consult.

## Missions *(continued from page two)*

"OHSU has 13,000 insured employees plus 4,000 insured students, residents, and post-docs who could get their care here at the dental school. We're convenient, we provide excellent care, and we want employees to choose us when selecting a dental provider."

Low-level marketing to employees and students has been underway the past few months to boost Faculty Dental Practice enrollment, including a Web page overhaul, paycheck insert, information about the dental school within the packets new employees receive at orientation, and recall notices to current patients. A Faculty Dental Practice director was appointed (**Kevin Kwiecien**, D.M.D. '98) and more faculty hired for the FDP clinic.

The recall notices alone have already stimulated the patient base within the Faculty Dental Practice, said Dr. Chiodo.

Another mission area currently being re-charged is research. With OHSU School of Dentistry at number 40 of 49 United States dental schools in National Institutes of Health research funding (\$363,598 in 2011), and with competition for scarce dollars getting tougher, Dr. Chiodo has created a Dean's Fund for Research Support.

The Dean's Fund for Research Support provides funds for preliminary studies (up to \$60K over two years); bridge funding (up to \$40K for researchers between grants); and core costs (up to 5K for such fees as a biostatistician). "This will set the stage now for future research growth," said Dr. Chiodo. "It won't happen overnight."

**David Morton**, Ph.D., associate dean for research, agreed. "We need to do more to get funding," he said. "While we have been successfully garnering more grants since 2009 and are off to a good *(continued, right column)*

## PeopleMovers

OHSU School of Dentistry welcomes the following recent new faculty:

\***Vincent Liguore**, D.D.S., is a part-time assistant professor of restorative dentistry.

\***Jeremy Miller**, R.D.H., is a part-time periodontology instructor.

\***Shahin Rashidi-Nazami**, D.M.D. '89, has joined the School part-time as an assistant professor assigned to the Faculty Dental Practice. Dr. Rashidi particularly enjoys cosmetic dentistry and says "beautiful smiles change people's lives and that is my goal." Daughter **Sheeva Azimi**, D.M.D. '11, graduated from OHSU last year and has joined her mother in her Tigard practice. Dr. Rashidi enjoys being with family and friends, reading, travel, cooking, and dancing.

\***Charles Rightmer**, D.D.S., Endo '87, Honorary Alumnus '97, is a part-time assistant professor of endodontology.

\***Lisa Yarborough**, D.D.S., Pediatric Dentistry '11, is a part-time assistant professor in pediatric dentistry.

\***Todd Young**, D.D.S., is a part-time assistant professor in pediatric dentistry.

## Missions *(continued from left column)*

start in 2012 (see page one), we need to get more proposals out the door."

Dr. Morton encouraged dental school researchers to get preliminary studies funded through the Dean's office to obtain the data necessary for obtaining larger grants and then "think bigger" by pursuing new avenues for research funding such as industry, foundation, and even OHSU's new cardiovascular institute.