

PITT DENTAL MEDICINE

Winter 2016

RESEARCH AND THE
FUTURE OF DENTAL MEDICINE

Begins
Here



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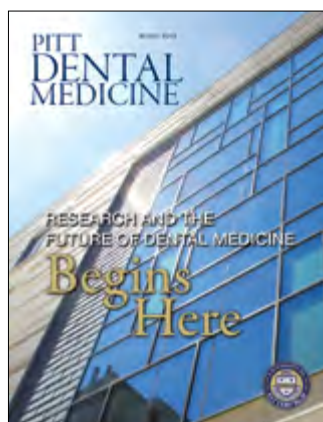
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ON THE COVER

The Pavilion at Salk Hall officially opened on September 15, 2015. In this issue we present some of the revolutionary research that is taking place within its walls.





The School of Dental Medicine accomplished a milestone with the completion of the Salk Pavilion Research Tower and its attached “Commons Area.” This long awaited addition to our physical structure now permits our active research into craniofacial regeneration to function in state-of-the-art facilities with the ability to have very substantial cross-interaction among researchers. Of course our very active Center for Dental and Craniofacial Genetics continues with successful research in a building which is approximately two miles from this current Pavilion. Therefore, our entire research endeavors essentially span Oakland as they also intersect with the McGowan Institute for Regenerative Medicine, the School of Medicine and the Department of Bioengineering in the School of Engineering. Headed by Dr. Charles Sfier our Center for Craniofacial Regeneration is exploring new ways to enhance healing.

It is worthwhile to note that all of the research performed here is intended to improve the human condition. This, of course, means translating our bench research into active clinical practice. At the School of Dental Medicine we are in a unique position to permit that to occur as many of our clinicians are in close proximity to our researchers.

A very important part of our clinicians and our clinical practice includes residency education. These specialists of the future really are the work horses for incorporating research in conjunction with our clinicians. This issue of Pitt Dental Medicine will highlight both our research endeavors and the ability

to translate those efforts into clinical practice. It will also explore the important role our residencies have in our specialty areas. State of the art endeavors including microscopic endodontic management, computer assisted design and manufactured prosthodontics, three dimensional imaging and use of all aspects of technology are driven by faculty and the residents they serve in our related specialties. I therefore invite you to read this magazine with an eye toward the position of the School, its ongoing research and clinical practice.

As a special note, our school again has been recognized as being in the top ten of National Institute of Dental and Craniofacial Research (NIDCR) funded institutions. A high honor indeed. This is not our only source of funding. Our researchers also work in conjunction with the National Cancer Institute, the Department of Health and Human Services and National Science Foundation.

Sincerely,

A handwritten signature in black ink, appearing to read "Thomas W. Murray".

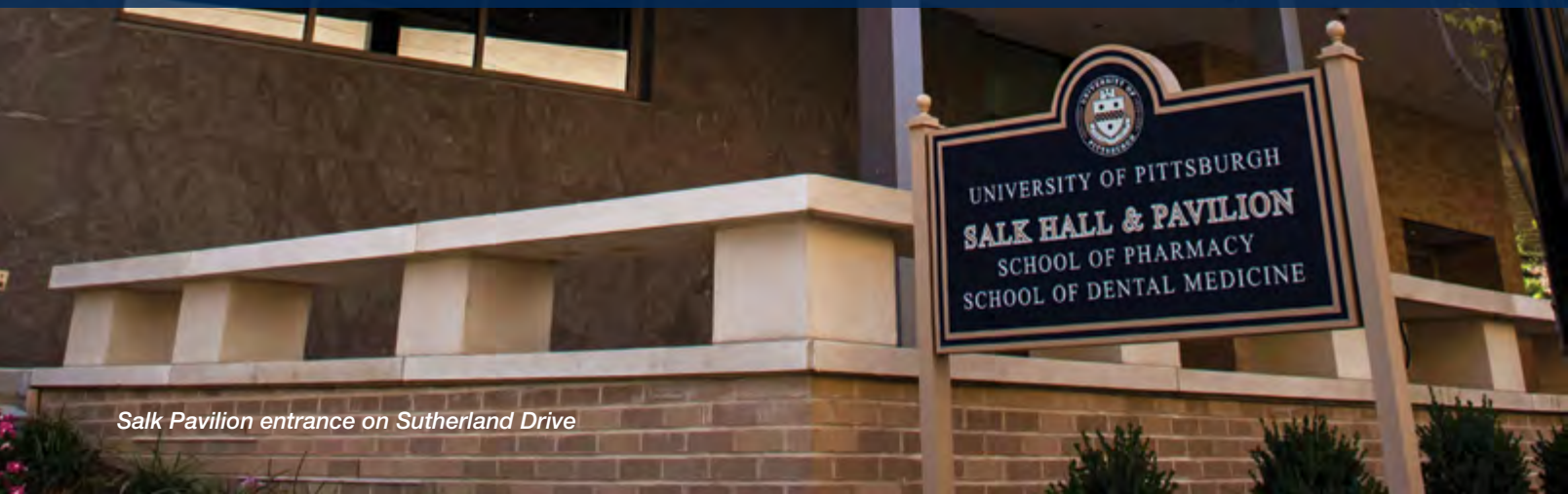
*Distinguished Service Professor and Dean,
University of Pittsburgh
School of Dental Medicine*



RESEARCH AND THE FUTURE OF DENTAL MEDICINE

Begins Here

The School of Dental Medicine has been one of the nation's leading research institutions for most of its long history. Throughout the past decade the school has been a top-tier-ranked National Institutes of Health (NIH)/National Institute of Dental and Craniofacial Research (NIDCR) institution. Funding from these organizations and others, such as the Department of Defense and private corporations, has supported many types of research at the school. Such successful research efforts also can be traced to the cooperative approach taken by both research and clinical faculty. With the opening of Salk Pavilion, we present influential new and ongoing research and what it means to clinicians and patients, and for the study of dental medicine.



Salk Pavilion entrance on Sutherland Drive

The Center for Craniofacial Regeneration is Pivotal to Today's Growing Research

Occupying two floors of Salk Pavilion is the Center for Craniofacial Regeneration (CCR). This University of Pittsburgh designated Center of Excellence is directed by Charles Sfeir, DDS, PhD, who is also the Associate Dean of Research, and chair of the Department of Periodontics and Preventive Medicine at the School of Dental Medicine. Both a clinician and researcher, Dr. Sfeir seeks new treatments for patients by undertaking some of the region's most cutting-edge research.

"There is a real need to design new approaches to treat periodontal disease."

Dr. Charles Sfeir

Research studies in the CCR range from the molecular and cellular to the whole-organism level. Studies include fundamental biological phenomena related to the development, structure, and function of the craniofacial region and the development of new therapies, biomaterials, and diagnostic tools for the treatment of craniofacial diseases and disorders.

The focus of the CCR is in five areas:

- the development of bio-inspired materials for mineralized tissue engineering as well as understanding extracellular matrix proteins involved in mineralized tissue biology;
 - the development of fixation devices using resorbable metals;
 - the development of novel periodontal therapies using modulation of the immune system strategies;
 - the development of tissue engineering strategies for pulp tissue regeneration; and
 - translational research that involves pre-clinical animal models.
- These goals guide various research

strategies carried out by faculty and staff members, and doctoral and dental students from different backgrounds. Much of the research undertaken in the Center is of an intraprofessional nature and involves other departments at the school. For instance, researchers in the CCR work together with clinical faculty members from the Department of Oral and Maxillofacial Surgery to seek surgical treatments for regenerating bone and other tissues, with the Department of Endodontics on pulp regeneration and with the Department of Periodontics to develop treatments for patients with periodontal disease. The CCR also reaches beyond the field of dentistry and works interprofessionally with many schools, departments and areas of study at the University, such as the Schools of Pharmacy and Engineering. The CCR participates in interdisciplinary research efforts that are developing advances in engineering various tissue types for the treatment of functional and cosmetic wounds and defects of the face and skull. Many clinical and research faculty members at the school also are members of the University of Pittsburgh's McGowan Institute for Regenerative Medicine, one of the premiere research centers in the nation bringing together varied disciplines from throughout the University.

CCR research is funded in part by the NIH, the National Science Foundation and the United States Department of Defense.

Understanding Biology and Biomineralization is Foundational for Research at the CCR

Research in the CCR begins with a thorough understanding of the mechanisms of craniofacial bone development to better understand biomineralization; the biology of bone and tooth formation. This fundamental knowledge informs all of the technologies that are being developed. "When we better understand the biology of how bone and teeth form, we can develop new therapies that manage biomineralization by working with the natural processes" said Elia

Beniash, PhD, associate professor in the Department of Oral Biology. Dr. Beniash's studies in the biology of bone and other tissues is impacting and influencing a number of the ongoing investigations at the school. Working cooperatively with other researchers and clinicians, he is participating in many of the successful studies in the Center.

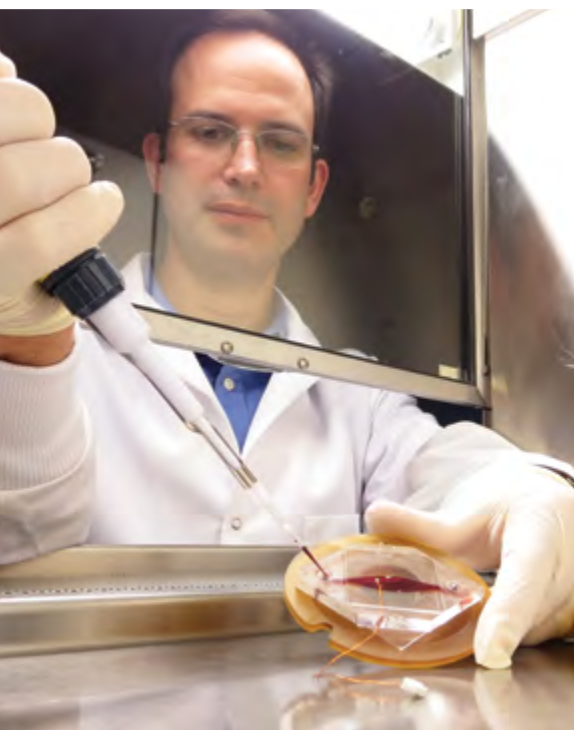
Additionally, improved diagnostic and treatment methods for patients with orofacial clefting and craniosynostosis are being identified through a better understanding of the molecular etiology of these conditions. Heather Szabo-Rogers, PhD, assistant professor in the Department of Oral Biology at the School of Dental Medicine is working closely with Dr. Sfeir to test how dysmorphologies in the cranial base can contribute to the development of orofacial clefting and craniosynostosis. Next generation sequencing, traditional embryology and animal models are being utilized to uncover the molecular mechanisms of these defects. Findings from the lab's studies will effect better diagnosis and care of patients.

Engineering Cellular Microenvironment Regenerative Therapies for Endodontic Treatments

Over the past year, the development of new techniques for pulp regeneration for endodontic therapy has been a priority for clinicians and researchers at the School of Dental Medicine. Department of Endodontics Chair, Herbert Ray, DMD, joined by an expansive group from the CCR, has been testing applications of a new regenerative therapy that shows promise in improving root canal therapies. Current conventional root canal therapy involves removing the dental pulp and replacing it with gutta percha, a rubber-like material used to fill the canal that is left when diseased dental pulp is removed from the tooth. Because of his vast clinical experience, Dr. Ray immediately recognized the biological potential of a new hydrogel scaffold material developed by Dr. Juan Taboas, assistant professor in the Department of Oral Biology at

the School of Dental Medicine. In his initial observation about why this new hydrogel material could improve endodontic treatments, Dr. Ray says, “If we can build on and support the pulp’s innate ability to survive we can begin to realize the potential to regenerate this tissue.” (Please see page 10 for more on Dr. Ray’s research.)

The hydrogel scaffold was developed specifically for the regeneration of non-boney tissue. Changes in the permeability of the hydrogel influence the application of the gel and how well cells within it can communicate with one another. Hydrogel can be tailored to various applications such as dental pulp. Testing has shown that the environment surrounding a hydrogel application can be controlled through the addition of microfluidic bioreactors, which enable the researchers to see how the gradient signaling molecules within the gel direct and guide cells through a process called chemotaxis (how cells direct their movements based on certain chemicals within their environment.) Real Time Image-Based Cell Analysis, a technology also developed by Dr. Taboas, allow researchers to view these actions in real time.



Resorbable Metals in the Steel City

Researchers in the Center for Craniofacial Regeneration have been exploring the development of new devices for improved dental bone grafting and guided bone regeneration (GBR) as part of the National Science Foundation-funded Engineering Research Center for Revolutionizing Metallic Biomaterials. GBR is a bone grafting procedure that utilizes bone graft substitutes, barrier membranes and fixation devices to provide osteogenic cues to repair and regrow bone. It is used to rebuild bone in patients who have lost bone due to trauma, surgical resection, disease, or other causes.

New GBR technologies being developed in the CCR use craniofacial bone fixation devices made from a fully resorbable magnesium polymer composite. Magnesium (Mg) has a long history of safely being used in the body. Even though magnesium has been used for some time in medical devices, there currently is only one approved magnesium fixation device available: compression screws for the fixation of hand and wrist fractures only for use in Europe. Other popular materials that are currently used for GBR have drawbacks such as poor mechanical properties, clinical complications and infections. Surgical removal of fixation devices that are made from non-resorbable metals, such as titanium,



Micrograph of a hydrogel applied to an endodontic treatment.

is painful for the patient and can add complications for clinicians. Innovative research into GBR fixation devices has received funding and advisory support through the University of Pittsburgh Innovation Institute and Center for Medical Innovation, Innovation Works, and the Commonwealth of Pennsylvania.

There are many biomedical device companies that are very interested in the manufacture of this new technology, as well as both local and global distribution. Communications with these companies have already aided in development of the product through suggestions to better target end-user needs by simplifying the initial concepts and designs.

(Continued on page 8)

Juan Taboas, PhD

Dr. Juan Taboas joined the Center for Craniofacial Regeneration in 2011. With a background in his studies of how biological material develops naturally. Dr. Taboas is the recipient of a K01 Mentored Research Scientist Development Award from National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS)/National Institutes of Health (NIH). He studies normal tissue development and degenerative disease progression in engineered cellular microenvironment models and some of his projects employ photo-patterned hydrogel scaffolds, custom microfluidic bioreactors, and cell micro-patterning. Dr. Taboas also continues to work on creating microstructured growth plate-like cartilage to treat growth plate injury, skeletal dysplasia and complex bone injuries resulting from osteosarcoma resection or traumatic injury. Developed primarily for soft tissue regeneration, new applications of his hydrogel scaffold for boney tissue are being investigated.

Ribbon cutting event at Salk Pavilion. Pictured from left to right are: Dr. Patricia Kroboth, Dean, School of Pharmacy; Dr. Thomas Braun, Dean, School of Dental Medicine; Mr. Scott Bernotas, Associate Vice Chancellor, Facilities Management; Dr. Patrick Gallagher, Chancellor; and Dr. Arthur Levine, Senior Vice Chancellor, Health Sciences, Dean, School of Medicine



Building History

In 1961, the school's new home began with the renovation of Salk Hall (a scant six years after the building's namesake created the polo vaccine right in those very halls). When the Doctor of Dental Medicine degree replaced the Doctor of Dental Surgery degree in 1967, the school officially became the School of Dental Medicine.

The only renovation that Salk Hall saw in the past half-century was the expansion that created Salk Hall Annex, where the clinics for the school are now housed.

Now Salk Hall celebrates another expansion into the Salk Research Pavilion. The most striking element upon entering the building is the glorious atrium featuring a massive painting by Pitt Professor Emeritus Virgil Cantini. The building provides roughly 81,000 square feet of additional space with 23,000 square feet devoted to research for the School of Dental Medicine. Its exterior is a mix of dark and light gray stone imported from Germany with a modern interior. The building has Silver LEED certification, which includes plantings outside. All of the plants used in the surrounding gardens are native and beneficial to the habitat. Additionally, once established, the plants do not require irrigation beyond natural rainfall.

Every floor has designated space for 125-square-foot offices, restrooms, a kitchen area large enough for 16 people to eat together, and high-tech conference centers—the largest seats 40—where researchers and clinicians, students and

staff, can discuss the newest collaborative research efforts at the school. The laboratories have individual cold rooms and each floor shares space for sterilization and glass washing as well as a glass manifold. The building is wired with emergency power circuits to protect the freezers that secure various study cultures and growth mediums.

The corner conference rooms feature spectacular floor-to-ceiling windows that overlook Oakland with a view of the Monongahela River, a view that is certain to jostle the creative part of the scientific process. The Pavilion was officially opened during a formal ribbon-cutting ceremony on September 15, 2015.

The Atrium in Salk Pavilion features sky lights, a painting by Pitt Professor Emeritus Virgil Cantini, and a coffee shop.



The Center for Craniofacial Regeneration, the University and nanoMAG, a small business manufacturer of magnesium alloy products for medical applications, have submitted a National Institutes of Health (NIH) Small Business Technology Transfer (STTR) grant application that offers funding for Universities to partner with small businesses in the development of products where both offer differing, complementary expertise. Another, similar NIH grant, the Small Business Innovation Research (SBIR) grant, was recently awarded and studies are underway. Both of these grants will support cooperative efforts between the University and nanoMAG. For these studies, nanoMAG contributes their patent-pending magnesium alloy and the CCR offers the application of the alloy for GBR devices, as well as the University's biomedical research resources. The nanoMAG magnesium alloys are specifically designed to degrade in a controlled manner, adding other metals to manage the degradation of the metal. The added metals likewise work to adjust the mechanical properties of the magnesium, thus making it stronger or weaker as required for specific applications. Recent patent applications mean that the collaboration between nanoMAG and the University of Pittsburgh should lead to more effective and efficient production of the magnesium fixation devices.

University-Wide Research Team Seeks to End Periodontal Disease

Periodontal disease is considered one of the most pressing oral health concerns today. Current treatments available for periodontal disease include daily brushing and flossing as well as regular professional deep cleaning with scaling and root planing to remove calculus above and below the gum line. These strategies of mechanical tartar removal and antimicrobial delivery aim to reduce the amount of oral bacteria on the tooth surface, explained Dr. Sfeir. "Currently, we try to control the build-up of bacteria so it doesn't trigger severe inflammation, which could eventually

damage the bone and tissue that hold the teeth in place," he said. "But that strategy doesn't address the real cause of the problem, which is an overreaction of the immune system that causes a needlessly aggressive response to the presence of oral bacteria. There is a real need to design new approaches to treat periodontal disease."

There exists a balance between bacteria and the immune system response in a healthy mouth which prevents infection without creating inflammation. In some people a persistent bacterial overload leads to an increase in inflammation and the destruction of bone and gingival tissues.

Researchers at the CCR are collaborating with researchers at the University of Pittsburgh Swanson School of Engineering to develop a way to maintain the balance of a patient's healthy bacteria. Evidence has shown that the diseased tissues contain a deficient amount of regulatory T-cells. "There is a lot of evidence now that shows these diseased gingival tissues are deficient in a subset of immune cells called regulatory T-cells, which tell attacking immune cells to stand down, stopping the inflammatory response," said Steven Little, Ph.D., associate professor and chair of the Department of Chemical and Petroleum Engineering. "We wanted to see what would happen if we brought these regulatory T-cells back to the gums." The team has developed a system of polymer microspheres that slowly release a chemokine called CCL22 that attracts regulatory T-cells. The team found that placing tiny amounts of the paste-like agent between the gums and teeth of animals with periodontal



disease did not change the amount of bacteria present. However, the treatments led to improvements in standard measures of periodontal disease, which included decreased pocket depth and gum bleeding, reflecting a reduction in inflammation as a result of increased numbers of regulatory T-cells. Next steps include developing the immune modulation strategy for human trials. This project has been made possible through funding from National Institutes of Health grants, the Wallace H. Coulter Foundation, the Camille and Henry Dreyfus Foundation, the Arnold and Mabel Beckman Foundation and the Commonwealth of Pennsylvania.

Translational Medicine: Driving the Future of Clinical Innovation

Translational medicine is generally defined as the idea of developing processes for making research advancements, such as new diagnostics, treatments, procedures or changes in behavior, available to clinicians in the community. At its core, translational medicine is not concerned with particular medical topics or specific diseases. Instead, it focuses on the process of actualizing research achievements to ultimately benefit patients; the most productive ideas from the great minds of our basic scientists working at the bench are used in inventive ways that can be translated quickly to patient care.

Recently, the University of Pittsburgh and some other universities have been adopting a translational medicine approach to research by helping clinicians and researchers connect to increase and improve communication between these groups. In fact, the School of Dental Medicine, under the guidance of Dr. Thomas Braun, Dean, has placed considerable emphasis on creating an environment that fosters identifying opportunities for clinicians and researchers to collaborate and develop innovative solutions that benefit patients. Many joint clinical/research grants are being realized at the school in support of these collaborative efforts. Likewise, the National Institutes of Health, is prioritizing support for translational medicine and has created the National Center for Advancing Translational Sciences (NCATS) with the aim of transforming the translational process so that new treatments and cures for diseases can be delivered faster to patients.

Dr. Bernard J. Costello, professor and Associate Dean for Faculty Affairs at the School of Dental Medicine, became involved in research expressly to help patients. He joined the school in the Department of Oral and Maxillofacial Surgery in 2001. Shortly after, he began collaborative research efforts with Dr. Sfeir and a team representing varied disciplines with the specific aim of developing products that are ultimately useful to patients. Dr. Costello notes, "What is unique about our group is the regular, in person, interaction that we have between superior clinicians, basic scientists, bioengineers, and material scientists. Just the act of putting people in the same room to incubate ideas breaks down the typical silos and other barriers. The interdisciplinary team works together in a new facility that was specifically designed to facilitate that open communication. Many research enterprises talk about doing this, but we achieve this, and the results include the development of a bone putty, resorbable metals, cellular constructs, and other technologies. This has created excitement and tangible support from many funding agencies and industry. The excitement is infectious, and people want to work

with this team." (learn more about Dr. Costello's research on page 11)

Dr. Costello saw the potential for this enterprise to be a new type of catalyst for translational research. "When we first started meeting over ten years ago, we had a handful of technologies in the early stages of the pipeline that were just beginning to show promise. Not only were the initial studies encouraging, with strong support from the Department of Defense and others, but we started to get interest from other faculty, residents, and students to start projects in bone, TMJ, stem cells, and other areas." Dr. Costello adds that this provided a new type of synergy and excitement that broke down commonplace academic silos. An interplay of ideas started developing, many of which have led to substantial research advances, intellectual property development, and new companies. "It has been a way for us to facilitate scholarly activity within the school and have it be exciting for clinicians."

Interdisciplinary and translational approaches to research and clinical efforts are not unique to the School of Dental Medicine, but the school is one of the national leaders in this area. Dr. Braun supports this successful approach and has put key people in place to lead and advance clinical research efforts. While many studies are just beginning, others, such as the resorbable magnesium fixation devices, are very close to being available for use by clinicians. Both the Center for Craniofacial Regeneration and the University of Pittsburgh are involved beyond performing research. These institutions are actively promoting research developments by helping to move them into the marketplace.

Andrew Brown, PhD

Andrew Brown, PhD, began his graduate studies in August 2009 after completing his undergraduate studies at the University of Pittsburgh in Bioengineering. After beginning his studies toward his doctoral degree, Dr. Brown began working in the Center for Craniofacial Regeneration (CCR) under the guidance of Dr. Charles Sfeir, on the development of GBR devices. Dr. Brown has accepted a post-doctoral (post doc) position in the CCR for the next 6-12 months to carry on the work he has done thus far. He has been invited to submit a full proposal to Coulter Translational Research Partners II Program at the University of Pittsburgh to request funding support for the continuation of his research. During this time he will continue his research studies to confirm the newest technology that was developed during the last phases of his graduate work. Over the next 3-5 years he will work with his team to develop and refine the best path to move the magnesium fixation devices from the lab into the hands of clinicians. These next steps will include the final testing stages to ensure that the product is ready to be given FDA approval.

In Profile: Clinical Faculty Researchers

Dr. Herbert Ray



About five years ago, while working in his own private practice, Dr. Herbert Ray began to collaborate with University of Pittsburgh School of Dental Medicine faculty member Dr. Charles Sfeir in order to research methods of dental pulp regeneration. Dr. Ray since joined the University of Pittsburgh School of Dental Medicine as an assistant professor and now is the chair of the Department of Endodontics. Ongoing studies currently taking place in this department are looking at both cellular and non-cellular ways of regenerating dental pulp as well as developing scaffold materials that can either support cells or attract dental stem cell to the sight.

A conventional root canal involves removing the dental pulp and replacing it with a rubber-like material called gutta percha. As an endodontist, Dr. Herbert Ray's entire career has been focused on doing root canal therapy on teeth with various stages of pulpal disease, so he recognizes the biological potential of the dental pulp to survive and try to heal. He is investigating possibilities in treating the root canal with new therapies using tissue engineering methods to regenerate dental pulp to the area where pulp tissue was initially removed. He states, "If we can build on, and support the pulp's innate ability to survive we can begin to realize the potential to regenerate this tissue."

The advantages of this therapy are that rather than having essentially an inert material occupied space, there would be regenerated living tissue in the tooth. This would allow the normal function of the pulp to continue to be able to have an immunological response to bacterial challenges to the tooth and allow continued development to the root. Another result would also be possibly generating new hard tissue within the

canal itself to allow as with any functioning dental pulp. This will theoretically bring back the defense mechanisms to the tooth that was lost.

Currently, the research has a number of novel materials that are showing quite a bit of promise. Other studies are showing that it is possible to regenerate a pulp-like tissue.

Regenerative endodontics started about 10 years ago on immature permanent teeth in children who typically had trauma. It was a method of allowing the tooth to continue to develop. Over the years, the researchers have developed therapies where a young patient's own blood is used to create a scaffold to place into the root canal space that would otherwise cease to develop. This method then allows an in-growth of vital tissue. Endodontic residents at the School of Dental Medicine have successfully treated over 80 cases in young permanent teeth and Dr. Ray adds there is "a high level of success".

Dr. Ray and the researchers are working on expanding this type of therapy in teeth that have fully matured and in teeth where a portion of the pulp remains vital. The researchers are trying to utilize what the patient comes with in hopes of developing a therapy that is not cost prohibitive. Projections indicate that regenerating a pulp-like tissue in a non-infected permanent tooth may be possible in the next five to seven years. •



Dr. B.J. Costello

Craniofacial anomalies may affect as many as three percent of all babies. Craniofacial anomalies can be caused by any of more than 400 syndromes and malformations. Repairing the defects associated with these anomalies requires a long-range approach that includes identification of the syndrome or malformation; a thorough evaluation of the patient; thoughtful, staged reconstruction by a highly-skilled team; and long-term follow-up care. While most techniques are predictable, yielding successful results, some deformities are challenging due to a lack of tissue or significant disruption of the anatomy.

Screws and plates used to repair fractures and defects in craniofacial area have a long history and include gold, silver, and alloy wires; steel plates; vanadium steel; Vitallium; Titanium alloys; and most recently, resorbable materials such as polylactic acid polymers and magnesium alloys. Early on, many of these metal alloys were developed and manufactured right here in Pittsburgh. Today, the translational research group in the Craniofacial Center for Regeneration is bringing Pittsburgh back to the leading edge of the latest technology, now using magnesium.

“I find it fascinating that many of the early steel plates and screw designs were developed, in part, from alloy chemistry advances here in Pittsburgh many years ago. Today, we are approaching the bicentennial for Pittsburgh and we are back at the forefront of these technologies while the city enjoys a rebirth, thanks to the medical and education enterprises here in Western Pennsylvania. The technology has come full circle, and it is a very exciting time to be at Pitt.”

– Dr. B. J. Costello

Bernard J. Costello DMD, MD, Professor and Fellowship Director in the Department of Oral and Maxillofacial Surgery, and Associate Dean for Faculty Affairs at the School of Dental Medicine, joined Pitt as a surgeon and full-time faculty member in 2001. Currently, he is investigating new customized bone regeneration technologies that aim to improve aesthetics and function of craniofacial defects. To this end, he has joined together with the team represented by Dr. Charles Sfeir, director of the Center for Craniofacial Regeneration to design a fully-resorbable load bearing bone and soft tissue replacement to be used in craniomaxillofacial surgery. Drs. Costello and Sfeir, together with collaborators across the University, have been successful at developing and testing synthetic regenerative bone replacements, resorbable magnesium fixation devices, and cellular regenerative technologies. This team approach is unique and has produced some very interesting results thus far.

First, the research team set out to prove some initial concepts related to resorbable metals. “The team’s hypothesis was that a model incorporating magnesium alloys surrounded by human stem cells would allow them to study and measure alloy degradation and biological effects” said Dr. Costello. “We worked with many people in the lab, including Drs. Amy Chaya, Andrew Brown, Charles Sfeir, and others to come up with ways to translate these technologies to actual clinical use rather than have them be seen as isolated bench projects. Working hand-in-hand is key. Basic scientists regularly meet with the surgeons to develop these ideas with a patient solution in mind the entire time.”

The first stage included the development of a 3-D model that used magnesium and a scaffold of human bone marrow stromal osteoprogenitor cells (hBMSCs) which can give rise to osteoblasts, thereby increasing the patient’s own bone

growth. Assessment of the success of the model had to include observations of cellular behavior; metal degradation; and any cellular response. A second scaffoldless model was developed using human-derived cells surrounding the magnesium permitting additional study of the specific degradation process. Finding out if and how magnesium would change the environment favorably, or change local cells during its degradation was important to determine safety and efficacy. These findings have led to a number of publications and have attracted the attention of the very best industrial partners in this area.

Another area that has captured the attention of the Coulter Foundation is the combination of resorbable polymers and a magnesium-based material. Combination materials have been used to develop bone grafting techniques and vertical augmentation procedures—a very difficult problem to solve for patients. Magnesium is used due to its unique ability to facilitate bone growth in defects. “This has the potential to be a major advance in my field,” says Dr. Costello. “Our abilities are somewhat limited when we borrow tissue from another location, because the architecture or healing is often suboptimal. Using these techniques, we may be able to custom-tailor the architecture we desire, which is currently a difficult thing to achieve—particularly for dental implant reconstruction in challenging cases. Solving these types of problems is why translational research is so exciting. You can see it really helping patients one day.”

The group has also had success with the use of mesenchymal stem cells for regeneration of periosteum, recently published in the *Journal of Oral and Maxillofacial Surgery*. “Our next endeavor in the early stages of development is to use patient-derived mesenchymal stem cells from bone, grow them using established expansion techniques and anion techniques

(Dr. B.J. Costello continued)

here at the University, and re-implant them for regenerating defects of the craniomaxillofacial skeleton.” A key aspect of this research grew out of basic science work with Dr. Fatima Syed-Picard, who is well-known for her work in this area and a collaborator with Drs. Costello and Sfeir for some time. “Having cellular technologies as part of our group substantially improves our portfolio of technologies. Not only do we anticipate being able to translate this to patients, but the having the scientific

validation of the process is unique, and important to the field.”

The initial conclusions are very promising, and development of new models continues. Funding agencies and industry have been very supportive, and this allows the technologies to be developed into clinical trials. Refining the manufacturing and further defining the mechanism of degradation of the devices will be the next steps towards a clinical study of these materials.

The relatively new areas of regenerative medicine and biomaterial use in craniomaxillofacial surgery are responsible for driving current research and innovation in oral and maxillofacial surgery. These advances are on the precipice of transforming this field of surgical science if new innovation and technology are carefully and wisely applied. Pitt Dental Medicine is one of the leaders of advances such as these. ●

Dr. William Chung

Developing, testing and producing a safe effective clinical treatment is a long process requiring the highest rigor, dedication of time and effort on the part of the researching clinician. Dr. William Chung, associate professor in the Department of Oral and Maxillofacial Surgery at the School of Dental Medicine, knows well about the hurdles and challenges that can happen as you move toward making a product ready for surgeons to apply. He has been developing a new application of an extracellular matrix (ECM) that was developed by Dr. Steve Badylak of the McGowan Institute at Pitt. In patients with temporomandibular joint (TMJ) meniscus damage, the ECM replaces the meniscus (disc), which sits between the head of the mandible and its articulating fossa. Dr. Chung has made great advances in his research over the past 5 years and looks forward to making the ECM available to surgeons in the near future.

Research began in 2009 after Dr. Chung attended a presentation given by Dr. Badylak on the ECM amongst other topics. Dr. Chung suggested trying the matrix within the TMJ. The matrix is already approved for human use in various sites such as the knee meniscus and Achilles. State funding for the initial trials was secured by Dr. Badylak and Dr. Thomas Braun, Dean, School of Dental Medicine.

After successfully completing an initial trial in dogs, Dr. Chung and Dr. Bryan Brown applied for funding from the Wallace H. Coulter Foundation to support their TMJ Matrix research in 2011. While they did not receive the award that year they were advised to reapply the following year, and their proposal was chosen to receive the coveted \$100,000 award. As the project expanded into a second phase, Dr. Alejandro Almarza, associate professor in the Department of Oral Biology, contributed his expertise in TMJ disorders and biomechanics testing.

A third large trial on pigs was recently undertaken with a grant (\$2 Million) from the National Institutes of Health (NIH). Dr. Chung has performed every surgical insertion of the matrix into the trial subjects along with Dr. Brown's assistance. Drs. Brown and Badylak have supported the project by securing critical funding. Dr. Braun has been instrumental in securing early funding as well as giving the team time and space in which to perform the trials. Cook Medical, which manufactures numerous products in support of minimally invasive surgeries, has recently agreed to manufacture the matrix for the research trials. Patents have been applied for and are pending at this time.

Past devices to replace the TMJ meniscus have proven faulty. The Proplast™ teflon was one such implant, eroding into the fossa. (Implants made of TeflonR -carbon or TeflonR - aluminum oxide fiber composite, have been associated with implant perforation, fragmentation and/or a foreign body response which may result in progressive bone degeneration of the mandibular condyle and/or the glenoid fossa). Currently there is no universally agreed upon treatment option for a damaged TMJ meniscus.

The new ECM promises to minimize, and possibly avoid, these arthritic changes in the joint and cause less pain to the patient. This ECM is also beneficial to the surgeon in that it can be stored easily and used without prior preparation. The matrix needs only to be hydrated then trimmed to fit the particular patient during surgery and sutured in place. A more important benefit is that the matrix recruits and induces the growth of cartilage cells, thereby replacing the matrix itself with the patient's own tissue over time. Patients can resume normal function, such as eating, and the likelihood of infections is extremely low.

There is great interest from manufactures to produce the matrix once it is approved by the FDA. Human trials will take approximately 18 months. Patients will be selected from within the School of Dental Medicine and UPMC. The trials will include pain questionnaires, clinical exams and MRIs to track success of the implanted matrix. If the first in-man trial is proven to be safe and successful, a multi-center larger human trial will be undertaken to ensure safety and effectiveness, after which final FDA approval will be considered. ●



Programs Prepare Residents to be Specialty Experts



Multidisciplinary Implant Center surgery, pictured from left to right: **Dr. David Hay**, resident in the Department of Periodontics; **Dr. Kelly Bolden Williams**, Assistant Professor and Director of the Advanced Dental Education Residency Program in Periodontics; and **Dr. Eric Heckenbach**, resident in the Department of Prosthodontics.

Advanced Education in General Dentistry

Dr. R. Donald Hoffman established the University of Pittsburgh's Advanced Education in General Dentistry (AEGD) Program in 1989 through a federal grant. Since 2002, Dr. Maribeth Krzesinski has been the director of the AEGD program. The one-year program is fully accredited by the Commission on Dental Accreditation (CODA). The program currently enrolls two AEGD residents who participate in a rigorous didactic schedule while providing comprehensive care to patients in the AEGD Clinic, the Center for Patients with Special Needs, and the Implant Center. The AEGD patient population is a diverse group consisting of patients with complex dental needs, medically compromised patients, geriatric patients, and long term routine general dental patient. Upon program completion, AEGD residents receive a Certificate of Advanced Study from the School of Dental Medicine. Alumni of the program have pursued careers in general dentistry, continued their education to become dental specialists, and some seek a career as dental educators.

Dental Anesthesiology

The Department of Dental Anesthesiology offers a 3-year Dental Anesthesiology Residency Program accredited by CODA. School of Dental Medicine faculty member Dr. Michael Cuddy directs the program which prepares dentists to manage pain and anxiety in adult, pediatric and special needs patients by using pharmacologic and non-pharmacologic techniques. During rotations residents participate in the anesthetic management of patients undergoing general surgery, complex head and neck procedures,

orthopedic surgery, and transplantation operations. A maximum of four residents are accepted into the program each year. Upon successful completion of the program graduates earn a Certificate in Dental Anesthesiology.

Endodontics

The School of Dental Medicine's fully accredited Endodontic Residency Program was initiated by Dr. Andrew Michanowicz in May, 1969. Currently, Dr. Herbert Ray, chair of the Endodontic Department, serves as the director of the residency program. Four residents graduate each year from the two-year program with a Certificate in Endodontics. Residents participate in various research projects. The department has focused on Micro-CT evaluation of clinical procedures and regenerative pulp therapies. Residents are responsible for all aspects of surgical and non-surgical endodontic therapy for patients at the dental school and provide care for patients throughout the region via a vast referral network with local private practices. All residents finish the program having completed Part I of the American Board of Endodontics Certification process, setting them well on their way to becoming Diplomates of the American Board of Endodontics.

General Practice Residency Program

The General Practice Residency (GPR) Program, sponsored by the University of Pittsburgh Medical Center (UPMC), offers a one-year program that provides residents with postdoctoral clinical and didactic experiences. The program is based out of Montefiore Hospital Dental Center, a multidisciplinary

center dedicated to serving the dental needs of outpatients as well as specialized needs of patients admitted in the hospital. The center cares for patients that require maxillofacial prosthetic and surgical treatment. Dr. Keith Richmond is the director of the program and an assistant professor at the University of Pittsburgh School of Dental Medicine. A total of three residents are enrolled each year and earn a Certificate of Training upon completion.

Oral and Maxillofacial Pathology

The residency program in Oral and Maxillofacial Pathology is a three-year certificate program offered through University of Pittsburgh Medical Center Medical Education (UPMC ME) and the School of Dental Medicine. The program was championed by E. Leon Barnes, MD, the chair of the Department of Diagnostic Science at the time, 2001, and was one of the duties assigned to Kurt Summersgill, DDS, PhD, when he arrived as a new faculty member. He continues to direct the program. The program received full accreditation and graduated its first resident in 2011. The program takes one or two residents per year. Residents participate in many different laboratory and clinical rotations at several hospitals in the UPMC system and have extensive rotation time at the School of Dental Medicine. Residents see oral pathology consultations from all departments within the school, as well as see clinical oral pathology patients. Oral and Maxillofacial Pathology biopsy specimens which arrive in the laboratory are generated both in-house and from multiple dental and medical specialists and generalists throughout the region. Faculty in the program

are board-certified in Oral and Maxillofacial Pathology, Oral and Maxillofacial Radiology, Oral Medicine, or Anatomic Pathology.

Oral and Maxillofacial Surgery

The Department of Oral and Maxillofacial Surgery (OMS) at the School of Dental Medicine offers several progressive training programs that represent some of the highest-quality training available in the specialty. These include a six-year dual-degree program, a four-year program, and a one-year accredited fellowship in Craniofacial/Pediatric Oral and Maxillofacial Surgery. Dr. Richard Bauer directs the programs, which accept each year; one fellow, two residents in the six-year program, and one resident in the four-year program. Our residency and fellowship programs have propelled individuals to top practices and academic health care organizations in the world, as well as academic leaders worldwide.

Residents who complete the six-year program earn a medical degree through a fully integrated curriculum beginning in the spring of the first year. These residents also earn a certificate in oral and maxillofacial surgery and participate in advanced surgical training in oral and maxillofacial surgery.

The four-year program includes a 33 month-long oral and maxillofacial surgery service. Residents rotate between internal medicine, general surgery, other subspecialty, and anesthesia services during the remaining 15 months of the program. Residents who complete the four-year program also earn a certificate in oral and maxillofacial surgery.

A one-year transitional internship program is also available for those who are considering their application in an OMS residency program.

The one year Pediatric Craniomaxillofacial Surgery Fellowship program is the longest standing, fully accredited program of its type in the United States and awards a certificate in this subspecialty to those who successfully complete the program. The fellowship focuses on cleft, craniofacial, trauma, pathology, reconstruction, and other disorders of the craniomaxillofacial region, as well as the interdisciplinary care of these complex issues. The fellowship prepares individuals to perform as leaders of an interdisciplinary team caring for patients with all forms of congenital and acquired disorders of this region.

Orthodontics and Dentofacial Orthopedics

The goals of the Orthodontics and Dentofacial Orthopedics Advanced Dental Education Residency Program at the School of Dental Medicine are to provide an excellent advanced education in the specialty of orthodontics and dentofacial orthopedics, to provide high-quality clinical care, and to conduct research designed to advance the knowledge of the specialty. Dr. Joseph Petrone serves as the

residency program director and accepts four residents in this fully accredited program each year. Students are able to receive a Certificate in Orthodontics and Dentofacial Orthopedics after completing the required three-year course of study. Residents in the program also may concurrently pursue additional study towards a Master of Dental Science degree in Orthodontics and Dentofacial Orthopedics. Successful completion of the program enables graduates to participate in the American Board of Orthodontics certifying examination.

Pediatric Dentistry

The Department of Pediatric Dentistry currently offers a Certificate in Pediatric Dentistry for two residents upon completion of a two-year program. Dr. Deborah Studen-Pavlovich, Chair of the Department of Pediatric Dentistry, directs the pediatric dental residency where residents are trained in advanced diagnostic and clinical techniques for providing care to children, adolescents, and individuals with special needs. In July 2016, the residency program will be expanded through a new three-year program, where two additional residents can earn both a Certificate in Pediatric Dentistry and a Multidisciplinary Masters in Public Health from the Graduate School of Public Health. With the addition of this new program a total of four residents per year will be accepted into the program. The new three-year program will focus on the care of patients in underserved rural settings and special needs populations. Expansion of the residency program was made possible by a two million dollar grant from Health Resources and Services Administration (HRSA). All residents completing the program are eligible for American Board of Pediatric Dentistry certification.

Periodontics

Dr. Charles Sfeir chairs the Department of Periodontics and Preventive Dentistry at the School of Dental Medicine. His vision is to establish the department as a center of excellence providing state-of-the-art periodontal and implant clinical therapies, as well as pursuing cutting edge research. The department seeks to promote periodontal health through preventive methods, and provide periodontal treatment using surgical and non-surgical techniques, and dental implant placement. The department is relied on as a periodontics resource to general dentists and periodontists locally and nationally. The department works closely with the Center for Craniofacial Regeneration which is housed in the Pavilion at Salk Hall, the newly built research tower, where the full spectrum of biological materials for regeneration of bone and soft tissue around teeth, are being developed to support implant placement. The Periodontics Residency Program, directed by Dr. Kelly Williams, is a three-year program leading to a certificate in periodontics. Residents also may pursue the option of completing a master's degree. Three residents are accepted annually

and are trained in all aspects of periodontal and dental implant diagnostics, treatment and placement. All residents are encouraged to participate in the American Academy of Periodontology (AAP) board-certification process in order to graduate as board-certified periodontists. Residents in the department are encouraged to pursue basic and clinical research projects beyond their clinical training.

Prosthodontics

Designed to train and equip graduates with cutting edge prosthodontic knowledge and techniques, the Advanced Education Residency Program in Prosthodontics is accredited American Dental Association (ADA). The three-year certificate program is directed by Department of Prosthodontics faculty member, Dr. Mohsen Azarbal, and it welcomes three students into the program each year. The program's didactic aspects complement and advance the residents' knowledge in prosthodontics, related disciplines and research methodology. The program's clinical components focus on diagnosis, treatment planning and treatment of dentate, partially edentulous and totally edentulous patients using the new technology including CAD/CAM generated restorations. The residents are exposed to a wide range of clinical experiences including treating TMJ disorders, complex denture cases, removable partial denture cases, full-mouth reconstruction, and implant related cases. These experiences along with an ongoing comprehensive literature review are utilized to help the residents prepare for certification from the American Board of Prosthodontists. Students receive a certificate in prosthodontics upon Residents may choose to pursue a master's degree (MDS) and are then required to complete extra didactic courses during the three-year program.

Oral Biology

The Department of Oral Biology Graduate Program offers basic, translational, and clinical studies in oral biology, biomedical research and health that span spatial scales from the molecular and cellular levels to the whole organism level. Dr. Mark Mooney serves as the chair the Oral Biology Department, which grants program graduates either Doctorate of Philosophy (PhD) or Master of Science (MS) degrees in Oral Biology. Students have the option of concentrating on either Craniofacial and Dental Genetics or Craniofacial Tissue Regeneration. The MS program requires a minimum of two years of study and students must complete the program within four years. Completion of the PhD program generally takes four to five years. This program is open to post-baccalaureate students, pre-doctoral dental students, and dental residents. The PhD and MS programs are independent degrees apart from DMD and Advanced Dental Education Residency Programs in the School of Dental Medicine.



Dr. Richard Bauer (DMD '07), Assistant Professor, has been named Oral and Maxillofacial Surgery Residency Program Director.



DMD Class of 2019

White Coat Ceremony 2015

On August 31, 2015, member of the incoming first professional class of 2019 and dental hygiene class of 2017 received their white coats during the White Coat Ceremony. This significant event welcomes incoming School of Dental Medicine students as they begin their professional career studies.

Dean Thomas Braun welcomed new students, families, faculty and staff to the event. Students were welcomed by Dr. Wade Newman, president of the Pennsylvania Dental Association (PDA), who spoke to students about the support the PDA can offer them as practicing dental professionals. Dr. Matthew Karski (DMD '10), president of the Dental Alumni Association, continued the welcome and reminded students of the significance and symbolism of the white coat.

Dental Hygiene students were personally welcomed by Ms. Angelina Riccelli, Director of the Dental Hygiene Program. Dr. Kurt Summersgill informed attendees about the history and importance of the national dental honor society, Omicron Kappa Upsilon (OKU). Vibrant, ongoing research was the topic for Dr. Charles Sfeir, Associate Dean for Research. Finally, Dr. Christine Wankiiri-Hale, Associate Dean for Student Affairs, invited each new student to receive his or her white coat. In addition to supporting the 2015 White Coat Ceremony, alumni wrote short notes of encouragement that incoming predoctoral or dental hygiene students found inside of their white coats to inspire and energize them as they begin this period of intense study and personal growth.

Family members, friends, faculty, and alumni who were not able to attend in person watched a live streaming broadcast on our Web site. Please visit dental.pitt.edu for details and directions to view this exciting event, or archived videos from past year's White Coat Ceremonies.

The White Coat Ceremony receives support in part from the Harry K. Zohn (DMD '84) and Cecile A. Feldman, DMD White Coat Endowment Fund as well as contributions from our alumni and friends.



Dr. Thomas Braun and Dr. Marnie Oakely welcome DMD student Hira Akbar



Dr. Thomas Braun, dean, with Dr. Wade Newman

MESSAGE FROM THE DENTAL ALUMNI ASSOCIATION PRESIDENT

Welcome to the 2016 winter edition of Pitt Dental Magazine. 2015 was a great year as we welcomed 80 new dental students and 34 hygiene students to the school. The annual general assembly and white coat ceremony was held on August 31 with special guest speaker PDA president, Dr. Wade Newman, addressing the incoming class. Later that week, on September 2, the Dental Alumni Association held an executive meeting followed by a mentoring session for incoming first-year students. Student turnout for the event was outstanding. It was a great time as alumni from different years rotated through groups of students answering their questions and addressing concerns about life during and beyond dental school.

For the past several years our alumni association in cooperation with the current classes of dental students has volunteered in various community outreach events. This year, alumni and students supported Global Links, a medical relief and development organization that supports health improvement initiatives in resource-poor communities, by collecting much needed medical supplies.

Next year we have an incredible opportunity to use our dental skills right here in Pittsburgh. The Mission of Mercy will be held at the David Lawrence Convention Center on Friday and Saturday, June 3 and 4, 2016. This outreach event provides an opportunity for those with limited access and are in desperate need of dental care to receive much needed dental work from volunteer dentists, hygienists and staff from the surrounding region. We hope that you will be generous in giving your time and talent to this event.

The alumni association held a homecoming reception and class reunion dinners on October 9 at the University Club. More than 300 alumni, including the class of 1965 celebrating its 50-year reunion, 20 golden alums, dental hygiene classes celebrating their 30- and 40-year reunions, and many students attended the event.

As we look ahead to spring and reflect on the past year, we anticipate another productive calendar year. Please mark your calendars for the upcoming Dean's Scholarship Ball to be held on April 2, 2016 and the Mission of Mercy event in June. Your thoughts and suggestions regarding the DAA are welcomed as we are constantly striving to meet the needs of our alumni and future alumni. I hope that you and your family enjoyed the holiday season and wish you all the very best in the coming year.

As always,
Hail to Pitt!

Dr. Matthew Karski (DMD '10)
President, Dental Alumni Association

MESSAGE FROM THE DENTAL ALUMNI ASSOCIATION VICE PRESIDENT DENTAL HYGIENE

Hello Alumni,

It was wonderful seeing alumni from the classes of 1975, 1980, and 1981 reconnect at the 2015 School of Dental Medicine Homecoming event in October. The evening ended with fireworks and a light show at the Cathedral of Learning that those in attendance were able to view from the rooftop of the University Club. This year's Homecoming celebrated dental and dental hygiene classes ending in 0 or 5, although many from other classes attended the fun event.

I hope that you will make plans to attend the 93rd Annual Session of the American Dental Hygiene Association and Center for Lifelong Learning.

This year the annual event takes place from June 8- 14, 2016 at the David Lawrence Convention Center in Pittsburgh. The session brings the latest in dental hygiene continuing education and product information to our city. Also, we hope to see you at the reception that is planned for Pitt Dental Hygiene graduates. You may find more information or register at www.adha.org/annual-session.

Ms. Susan Ban (DH '80)
*Vice President, Dental Hygiene,
Dental Alumni Association*

Mission *of* Mercy

Caring Volunteers are at the Heart of our Dental Mission

June 3 and 4, 2016

David Lawrence Convention Center in Pittsburgh

Mission of Mercy in Pennsylvania (MOM-n-PA) is a once-a-year, large-scale dental clinic of 100 dental chairs and more, where dental treatment is provided at no cost to individuals who cannot afford dental care. MOM-n-PA provides dental care for the relief of pain to thousands of patients with the greatest need. Many of the patients are from working families who do not have access to dental care or cannot afford dental insurance.

Volunteers are at the heart of MOM-n-PA; anyone who cares about the underserved can volunteer. About 1,000 volunteers are needed to successfully fulfill this year's Mission of Mercy in Pittsburgh. Volunteers needed include 400 lay volunteers, 250 dentists, 100 hygienists, and 250 dental assistants. Visit MOM-n-PA.com to learn more about the role of volunteers at MOM.

The first Mission of Mercy took place in Philadelphia in 2013 where MOM-n-PA provided \$850,000 in free dental care to 1,820 patients. The vision then was to establish and coordinate an annual dental mission to provide free dental care to underserved people, utilizing volunteer dentists, auxiliaries and lay volunteers.

MOM-n-PA strives to:

- relieve pain and suffering due to dental disease for the underserved
- Educate patients on preventive measures
- Compile data on the dental needs of the underserved
- Educate policy makers

As of today, MOM-n-PA has completed 18,291 procedures on 5,572 patients, and donated more than \$2,730,000 to patients in need with the help of nearly 3,000 volunteers.



For more information, or to volunteer, please visit MOM-n-PA.com



Follow us on Facebook at [MOM n PA Dental Missions](https://www.facebook.com/MOMnPADentalMissions)



Top: **Dr. Herbert Ray**, Chair of the Department of Endodontics, center, and some of the School of Dental Medicine residents who volunteered at the MOM-n-PA 2015 event.

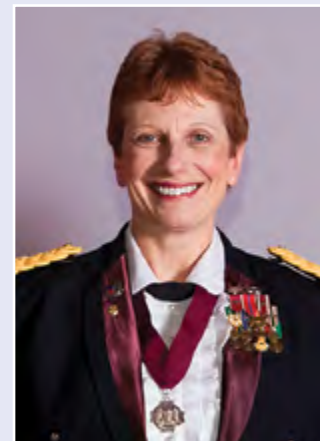
Bottom: Pitt Dental alumnus **Dr. Samuel Selcher** (DMD '75), center, makes his way across one of the treatment areas at MOM-n-PA Harrisburg in 2015.

ALUMNI UPDATES

Dr. Kenneth J. Bondra (DMD '72) of Lexington, Kentucky, recently retired from his private practice in oral and maxillofacial surgery. Currently, he is an assistant professor of oral and maxillofacial surgery at the University of Kentucky in Lexington.

Dr. Matthew Walter Pommer, Jr. (DMD '85) retired from the United States Navy Dental Corps in July, 2015, after 30 years of service and 14 house hold moves around the globe. Most recently he was stationed in Naples, Italy. His daughter, **Dr. Melanie Pommer (DMD '15)** also is a School of Dental Medicine alumna.

Dr. Joseph Ross (DMD '83) from New Castle, Pa., recently announced his candidacy for president of the Pennsylvania Dental Association (PDA).



Colonel Priscilla Hamilton, (DMD '82), retired from the U.S. Army in October, 2015, after having served on active duty since her graduation from the School of Dental Medicine in 1982. Her last assignment was as the Chief of Graduate Dental Education and Dean of the Army Postgraduate Dental School which is headquartered at Fort Sam in Houston, Texas. She is enjoying her retirement, and spending time rejuvenating her family's apple farm near Erie, Pa., but is keeping options open to remaining active in the profession.



Recently, several generations of the Korch family came together for a photo. From left to right:

Susan M. Korch-Appleby (DMD '95);
(front)
Peter P. Korch, Jr. (DDS '58);
Peter P. Korch III (DMD '91);
Michael J. Korch (DMD '04)

Congratulations to the following School of Dental Medicine Alumni who recently were inducted as new fellows of the American College of Dentists (ACD) and the International College of Dentists (ICD)

ACD Inductees

Dr. Tamara Brady (DMD '92)
Dr. Lon Kessler (DMD '86)
Dr. Judith Davenport (DMD '79)
Dr. Michael J. Gans (DMD '86)
Dr. Cynthia L. Schuler (DMD '84, DH '74)

ICD Inductees

Dr. Richard Marion Celko (DMD '89)
Dr. Judith Marylyn Davenport (DMD '79)
Dr. Jasmin de Guzman (DMD '07)
Dr. Andrew David Gould (DMD '95)
Dr. Mark Carl Hagan (DMD '85)
Dr. Barry Lee Holden (DMD '84)
Dr. Cynthia A. Iseman (DMD '97)
Dr. William Michael Kopp (DMD '73)
Dr. Maria J. Tancelosky (DMD '93)
Dr. Marian Schmitt Wolford (DMD '89)

Pitt Dental Medicine Alumni Reception at the ADA 2015 – America's Dental Meeting in Washington, DC

Reception at the Marriott Marquis on Friday, November 6, 2015, with 100 alumni and friends in attendance.



Left to right: **Dr. Ronald Bushick (EDIC)**, **Mrs. Elizabeth Braun**, **Dr. Thomas Braun**, and **Dr. Richard LoGuercio (EDIC)**



Left to right: **Dr. Judith Davenport (DMD'79)**, **Dr. Braun**, **Dr. Anita Greene (DMD '81)**



Keep us posted by sharing your news and updates. Email Nancy Poe at poen@pitt.edu, or call 412-648-8910.

Have you liked us on Facebook yet?

- University of Pittsburgh School of Dental Medicine
- University of Pittsburgh School of Dental Medicine Alumni Association



University Dental Health Services Oral and Maxillofacial Pathology Biopsy Service

For more than 40 years the **Oral and Maxillofacial Pathology Biopsy Service** has conducted consultation and tissue diagnostic services for the dental and medical communities of Western Pennsylvania.

Our board-certified oral and maxillofacial pathologists provide a rapid, accurate diagnosis of your biopsy specimens.

- Call or e-mail to request your free biopsy kits
- Your detailed pathology report will be sent by fax or mail
- The patient will be billed directly

dental.pitt.edu/oral-and-maxillofacial-pathology-biopsy-service

We also provide:

Oral Medicine Services 412-648-9100

Oral & Maxillofacial Radiology Services 412-648-8612

We accept Medicare and many commercial insurance programs, including Highmark BlueCross/BlueShield and UPMC.

412-648-8629

PittsburghOralPathology@dental.pitt.edu



Homecoming 2015



Class of 2000



Class of 2005





"Being involved with the Dental Alumni Association (DAA) has been a truly enriching experience. I was active in alumni activities intermittently while raising my children. When they went off at college I returned to Pitt and became more involved. Taking part in DAA activities gives me a chance to reconnect with the school, engage with my classmates, and meet new students who will carry dental medicine into the future. Renewing many old friendships has been particularly rewarding. One of the other benefits that my participation in alumni events gave me is the opportunity to stay informed about developments and technology in dental hygiene through continuing education opportunities. I would encourage alumni to come back, get involved and help us to preserve and promote pride in our school, and be part of a proud Pitt tradition. "

Susan Ban (DH '80)



Class of 1985

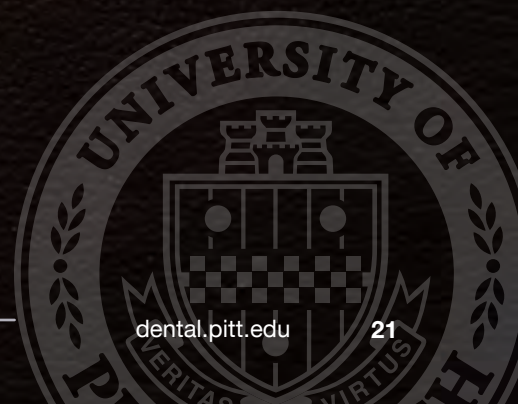
"I haven't always been connected with the school as an alumna. I was most out of touch when my children were young. I have participated in several alumni activities since 2009 when I joined the school as a faculty member.

At the Homecoming reunion it was nice to catch up with some of my classmates. There were so many old friends to catch up with that I missed talking with some of them. I was excited to see who would attend: Many traveled from quite far away. I do wish more of my classmates from the region had attended. It was a great event and I am looking forward to playing a bigger role in coordinating future Homecoming events.

When I returned to the SDM I didn't anticipate that I would enjoy interacting with alumni and students as much as I do. Students are like sponges; they are very interested in knowing from alumni what it is like to be in private practice. Many students are very interested in outreach programs, underserved populations of patients, community volunteering, and participating in mission trips. Having an opportunity to learn more from alumni at events such as Homecoming and Mentoring events is outstanding. I do not recall having so much exposure to this kind of knowledge when I was a student. I think these are excellent experiences for the young professionals: our future colleagues."

Dr. Lynne Taiclet (DMD '85)

***Thank you to
the 2015 class
organizers for
making this
year's reunion
a success.***



Homecoming 2015



Thank you to the following
Golden Alumni (*before
1965*) for joining the
Homecoming festivities.

Dr. James Desetti (DDS '52)

Dr. David Edwards (DDS '60)

Dr. F. Eugene Ewing (DDS '53)

Dr. Peter Guevara (DMD '78)

Dr. Robert Horn (DDS '53)

Dr. Paul Johnston (DDS '53)

Dr. Steve Kondis (DDS '52)

Dr. Raymond Lancione (DDS '57)

Dr. Donald Sarandria (DDS '57)

Dr. Robert P. Smith (DDS '60)



Dental Hygiene Class of 1975



Dental Hygiene Class of 1980



Class of 1990



Class of 1980



Class of 1970



Class of 1965



Class of 2010



Class of 1995



Class of 1975



Pictured above are, left to right, **Dr. Daniel Damratoski, (DMD '72); Mrs. Irene Hilinski-Damratoski; Dr. Diane Damratoski Romaine, (DMD '95); Mr. Alfred Romaine.**

"With my move from Pittsburgh area to Maryland, I have been very busy and haven't been as active in alumni events as I would like. It wasn't until my recent 20 year reunion that I truly began reconnecting with Pitt Dental Medicine, which was the starting point of my dental professional life. I learned a great deal from the many mentors I had while a student. Also, I was introduced to dental professionals who have profoundly influenced my career. I made some lasting friendships with classmates with whom I still practice in my community in Western Maryland. When I return to Pitt Dental Medicine and meet with my classmates and other alumni I feel as if no time has passed. Although I sometimes don't see many Pitt friends for years, the memories we share let us pick up right where we left off. It is such fun to reconnect with my old friends, to be warmly welcomed by others who share my profession, and feel good realizing, how much you've grown professionally."

Dr. Diane Romaine (DMD '95)

22ND ANNUAL T. F. BOWSER MEMORIAL LECTURE

Innovative Periodontics: Creating Success in Today's Dental Practice

*Presented by: Sam Low, DDS, MS, MEd
University of Florida, College of Dentistry, Professor Emeritus
L.D. Pankey Institute, Associate Faculty*



This course can help dentists and dental hygienists use their time more productively, as well as be a quality resource for what's new in dental products, systems and technology.

Periodontitis is a major contributor to tooth loss and resolving the disease process requires a commitment by the entire dental team to a systematic approach. This presentation will provide easy to implement protocols and technological solutions to find and manage your patients' periodontal disease. Attendees will learn more about delivering sound periodontal care and gaining success with patient case acceptance and tooth retention.

Upon completion of this course participants will be able to:

- standardize the collection of periodontal data to efficiently and accurately determine the prognosis of restorative abutments to help determine when to extract and place implants
- empower dental hygienists with expanded work descriptions
- investigate computer system approaches to determine risk assessment
- develop realistic non-surgical therapies and respective re-evaluation with an emphasis on new anti-inflammatory

systems that include micro-ultrasonics, laser technology, and nutraceuticals as probiotics and antioxidants

- determine the efficacy of utilizing various laser wavelengths in sulcular decontamination, degranulation, new attachment, and bone regeneration
- review parameters used to determine tooth short- and long-term prognosis and/or survival rate
- establish a quality periodontal maintenance program that enhances the restorative practice including third party reimbursement
- create positive interactions between dentists, periodontists, and dental hygienists through communication skills and continuous quality improvement to enhance esthetics, tooth retention, and implant placement



Samuel B. Low, D.D.S., M.S., M.Ed.

As an associate faculty member of the L.D. Pankey Institute for 20 years and Professor Emeritus, University of Florida, College of Dentistry, Dr. Low's many years' experience training dental professionals is evident in his straightforward, informative, and entertaining teaching style.

Dr. Low's presentations focus on creating positive interactions between dentists, periodontists, and dental hygienists through communication skills and continuous quality improvement to enhance esthetics, tooth retention, and implant placement.

The T. F. Bowser Memorial Lecture Series was established in 1995 by Dr. Ellsworth T. Bowser to honor his father, Dr. Theodore Bowser (DDS '24). The series has featured notable speakers on a variety of topics and is the School of Dental Medicine Center for Continuing Education's most well-respected and well-attended continuing education event.

For a complete list of continuing education courses offered by the School of Dental Medicine, including online and off-campus courses, please visit the School of Dental Medicine Web site at dental.pitt.edu/ce.

For further information, or to register for a CE course, please contact Diane Fleishman at 412-648-8370.

**Saturday, April 9, 2016
8:30a.m.-1p.m.**

**Scaife Hall (Pitt Medical School),
Auditoriums 5 and 6**

**Dentists \$75/Auxiliaries \$50
Lecture Credit Hours: 4
Course 17415L**

IN MEMORIAM

Dr. Ernest E. Alvin Jr. (DDS '46)
June 20, 2015

Dr. Eric Antila (DDS '58)
July 25, 2015

Dr. Thomas R. Bach (DDS '58)
November 16, 2015

Dr. James Roger Bonanni (DMD '81)
July 2, 2015

Dr. Richard Bonomo (DMD '75)

Ms. Davria M. Cohen (DH '70)
August 21, 2015

Dr. Paul J. DeSantis (DDS '63)
July 20, 2015

Dr. Laurence E. Dietz (DDS '55)
July 25, 2015

Dr. Don A. Higby (DDS '55)
August 27, 2015

Dr. Paul B. Johnston (DDS '52)
New Kensington, Pa.
September 10, 2015

Dr. Jefferson Joseph Jones (DDS '64)
November 14, 2015

Dr. Joseph Gabler Kirkpatrick (DDS '64)
June 27, 2015

Dr. Stuart N. Kline (DDS '55)
November 10, 2015

Dr. Theodore M. Kottraba (DDS '55)
September 5, 2015

Dr. Rudolph J. Mattioli (DDS '58)
August 21, 2015

Dr. Thomas F. McCann (DDS '57)
September 25, 2015

Dr. D. Kenneth Morrow Jr. (DDS '60)
August 15, 2015

Dr. Peter J. Nikas (DDS '59)
October 27, 2015

Dr. Bryan D. Oberheim (DMD '98, Ortho '01)
October 16, 2015

Dr. Walter Parks Sr. (DDS '55)
September 18, 2015

Dr. John Pelton (Anesth '93)
September 12, 2015

Ms. Deborah A. Petty (DH '84)
July 19, 2015

Dr. Andrew J. Pickard (DDS '44)
November 8, 2015

Dr. Robert F. Pollock (DDS '62)
June 30, 2015

Dr. Stanley L. Pollock (DDS '50; MDS, Anesth '57)
July 31, 2015

Dr. Jay Reznik (DMD '72; MDS, Pedo '75)
September 4, 2015

Dr. John F. Seasoltz (DDS '54)
October 1, 2015

Dr. Larry Mark Silverman (DMD '74)
August 17, 2015

Dr. John R. Smelko (DMD '74)
September 15, 2015

Dr. Arthur C. Stanton (DMD '67)
June 25, 2015

Dr. David A. Steegstra (DMD '69)
March 26, 2015

Dr. Norman Stock (DDS '52)
August 11, 2015

Dr. Aaron W. Stover Jr. (DDS '55)
September 3, 2015

Dr. B. Frank Taylor (DDS '52)
August 14, 2015

Dr. M. Lee Toothman (DDS '50)
January 8, 2015

Dr. Ben C. Turney (DMD '77)
August 4, 2015

Dr. Zachary Zaban (DMD '14)
August 7, 2015

Dr. Donald L. Zeile (DDS '51)
November 14, 2015

FORMER FACULTY

Dr. H. Raymond Primas Jr.
August 25, 2015

Alumnus, Legacy Laureate, and civil rights worker died at 90

Dr. H. Raymond Primus Jr. completed his DDS in 1947, was a Korean War veteran, Civil rights activist and international humanitarian. In the 1970s he delivered dental care and aid to the people of several African countries. As a retired dentist in Arizona he provided migrant children with free dental care.

He was a native of Pittsburgh, a faculty member at University of Pittsburgh, and was honored in 2007 with the University's highest alumni honor; Legacy Laureate, as well as the School of Dental Medicine Award of Appreciation. He served as president of the National Dental Association, an association representing african-american dentists.

Dr. Alan H. Segal (DDS '46, Perio MDS '70)
November 16, 2015

Pitt Dental Alumnus, Dr. Alan Segal, passed away on Monday, November 16, 2015. Dr. Segal was a Professor Emeritus in Periodontics Preventive Dentistry at the School of Dental Medicine and served as the Dental Alumni Association President from 1966-1968.

Dr. John A. Schmutz Jr.
October 7, 2015

Dr. Schmutz is a graduate of the School of Dental Medicine and received his DMD in 1966. He taught pathology at the School of Dental Medicine. Upon retiring, Dr. Schmutz was honored as an Associate Professor Emeritus by the Department of Diagnostic Sciences.

Dr. Jay Reznik (DMD '72, Ped '75)
September 4, 2015

Pitt alumnus and faculty member, Dr. Jay Reznik, passed away on September 4, 2014. Dr. Reznik graduated from the School of Dental Medicine in 1972 and went on to complete his residency in the pediatric dentistry in 1975. He was a faculty member in the Department of Pediatric Dentistry from 1985 through 1994.

In 2008, Dr. Reznik was awarded the Pitt Dental Distinguished Alumnus Award in recognition of his many years of service in pediatric dentistry, particularly in the treatment of patients with special needs. His leadership as past director of the school's special needs program, now the Center for Patient's with Special Needs, forged a strong presence in this area of dental education and provided many Pitt Dental Medicine graduates with instruction in treating this underserved population.



Dr. Michael Chambers Inducted into the Charles G. Watson Chapter of the Arnold P. Gold Humanism Honor Society

Pitt Dental alumnus and resident **Dr. Michael Chambers** (DMD '12) has been honored as a 2016 inductee into the Charles G. Watson Chapter of the Arnold P. Gold Humanism Honor Society. Dr. Chambers was selected by his peers of the University of Pittsburgh School of Medicine Class of 2016 in recognition of his outstanding clinical and interpersonal skills. Before he attended dental school, Dr. Chambers served as a school band instructor. He credits his artistic background in aiding in his success for "in addition to being a musician, I am also an artist and enjoy drawing, painting, and sculpting. These fine motor skills have proven quite helpful as a dentist and surgeon".

The society honors medical students, residents, fellows, and others who demonstrate high standards of humanistic clinical care, leadership, compassion and dedication to service. Founded in the late 1990s through grants from the Robert Wood Johnson Foundation, the Gold Humanism Honor Society currently has over 22,000 members who have attended medical schools in the United States. Members are internationally recognized for their humanistic achievement and have access to leadership development opportunities, awards and grants, and conferences and lectures.

After his medical school graduation, Dr. Chambers will attend the School of Dental Medicine where he will continue using his humanistic approach to treat patients while completing his residency in Oral and Maxillofacial Surgery and will graduate in 2018. Dr. Chamber adds "I am surrounded by some of the best people in the business and consider it an honor to train at Pitt under the tutelage of my attendings and beside my fellow residents".



Dr. Thomas Braun Designated Distinguished Service Professor

University of Pittsburgh Honors Dean with Highest Professorate Honor

University of Pittsburgh Chancellor Patrick Gallagher has bestowed upon **Dr. Thomas W. Braun** (DMD '73, PhD '77), Dean, School of Dental Medicine, the special faculty rank of Distinguished Service Professor. The appointment of a faculty member to a Distinguished Professorship at the University of Pittsburgh constitutes the highest honor that the University can accord a member of the professorate. In selecting Dr. Braun for this highest faculty rank the University recognizes his many important contributions to the School of Dental Medicine, the University of Pittsburgh, his field of endeavor, and the community.

School Invests in State-of-the-Art Omnicam

The University of Pittsburgh School of Dental Medicine is pleased to announce the recent acquisition of a state-of-the-art digital imaging CEREC Omnicam and complementary CEREC MC XL milling machine. These machines, acquired from Sirona, are being utilized in the school's Department of Prosthodontics to benefit students and patients throughout the school and clinic.

The Omnicam is an intraoral optical device used to capture a continuous digital video impression scan at a rate of 18 images per second. It is inserted directly into the patients mouth without any time consuming, specific preparation. Proprietary software translates the scans into precise, virtual 3D models in natural

color that are used to propose customized ceramic restorations for the patient.

The coordinated state-of-the-art milling machine, the CEREC MC XL, fabricates all-ceramic restorations using a digital feed from the Omnicam station. In roughly 12 minutes, the milling machine can carve a simple crown restoration from a block of solid porcelain. In addition to crowns, inlays, and onlays, the MC XL is able to also mill fixed bridges, veneers, and implant abutments and implant crowns.

Residents and students will be trained in the use of the CEREC Omnicam system, as well as other CEREC camera systems at the school.



Top Photo: Advanced Education in General Dentistry residents and prosthodontics residents are being trained on the use of the new Omnicam.

Bottom Photo: Dr. Thomas Kunkel is the school's expert on the use of CEREC in both educating students and clinical applications for patients.



Dr. Wankiiri-Hale participates in ADA Diversity Leadership

Dr. Christine Wankiiri-Hale (DMD '02), Associate Dean for Student Affairs, recently was selected as a member of the 2015-16 class of the ADA Institute for Diversity in Leadership. The ADA Institute for Diversity in Leadership is designed to enhance the leadership skills of dentists who belong to racial, ethnic and/or gender backgrounds that have been traditionally underrepresented in leadership roles. The Institute has increased class size from 12 to 16 this year to increase the number of leaders for whom it can provide an opportunity to gain leadership experience, strengthen professional networks and set new leadership paths in the profession and community. As a key part of the leadership learning experience, each participant designs and completes a personal leadership project for their community or the profession.

Dr. Wankiiri-Hale's project aims to improve the way in which diversity in mentoring positively affects the relationships among students, alumni and faculty. She foresees small group mentoring as the crux of the success of her project.

"Through these 'Dental Medicine Family Dinners', I hope to inspire alumni to consider embracing the opportunity to build mentoring relationships with students that I hope will last for years to come."

During a recent diversity event held at the School of Dental Medicine (please see page 31) Dr. Wankiiri-Hale introduced the idea to all those in attendance at the event. They are excited to be part of this new enterprise and look forward to being positive influences on young dental students.

Dr. Vieira Guest Lecturer at University of Oslo

Dr. Alexandre Vieira, associate professor and principal investigator for the Dental Registry and DNA Repository (DRDR), studies dental diseases and how genes and environmental factors affect them. He gave a guest lecture in October at the University of Oslo on this topic.

Dr. Vieira's talk, titled "Redefining the Caries Phenotype for Exploring Individual Susceptibility to the Disease," was about the relationship between genes and the susceptibility to caries.

During his stay in Norway he visited with Dr. Anne Bjorg Tveit, chair of the Department of Cariology at the University of Oslo. Dr. Tveit is also the advisor to Dr. Jenny Bogstad Sovik, who recently completed her PhD. As part of her doctoral thesis, Dr. Sovik performed genetic analysis of adolescents with acid damage to their teeth and generated her data at the Vieira lab, under the guidance of Dr. Vieira.

Dr. Vieira also recently was appointed as Faculty Representative to the Health Sciences Committee for the University of Pittsburgh. His one-year term is for the 2015-16 fiscal year.



Dr. Jenny Sovik and Dr. Alexandre Vieira during his recent visit to the University of Oslo



Dr. Mark Ochs Recognized by AAOMS

Dr. Mark Ochs, Associate Dean for Hospital Affairs, received the Philip L. Maloney Boston City Hospital/Boston Medical Center Alumni Trauma Award. This award is given annually by the American Association of Oral and Maxillofacial Surgeons (AAOMS) in recognition of significant contributions to the field of trauma. The award is granted by the Boston University Goldman School of Dental Medicine.

This prestigious award is given to recognize someone in the field of Oral and Maxillofacial Surgery who is not only an expert, but is dedicated to advancing science, surgical innovation, research, statistical outcomes and education in Oral and Maxillofacial Surgery. It is obvious that Dr. Ochs is an ideal recipient.

Dr. Ochs also was chosen this year to give the prestigious Maloney Trauma Lecture on Orbital Fractures at the annual AAOMS Meeting. He is a major authority on this treatment.

The award is named for Dr. Philip Maloney who was Chief of Dentistry and Oral and Maxillofacial Surgery at Boston City Hospital for 33 years. He is past-president of AAOMS, co-founder of the Research Fund at the AAOMS Foundation, and is the recipient of numerous awards.

Pitt-Led Cleft Lip and Palate Project Among the First Selected Under Federal Pediatric Research Act

Allison Hydzik

An innovative federal initiative to accelerate research into pediatric diseases and conditions will fund a University of Pittsburgh-led effort to examine the entire genomes of nearly 1,300 people to learn more about the causes of cleft lip and palate, and look for treatments.

In its first round of funding under the Gabriella Miller Kids First Research Act, the National Institutes of Health (NIH), Office of the NIH Director, selected a proposal from Pitt's School of Dental Medicine and Graduate School of Public Health to sequence the whole genomes of 430 children with clefts and their parents. According to the NIH, this is among the largest whole genome sequencing efforts to examine an oral condition that it has ever initiated.

"This sequencing will provide a wealth of data that will be made available to scientists everywhere, providing the basis for years of research into causes, prevention and treatment of cleft lip and palate," said project director and principal investigator Mary L. Marazita, Ph.D., professor and vice chair of Pitt's Department of Oral Biology, and director of the Center for Craniofacial and Dental Genetics. "We are thrilled that our project was among the first funded and excited for the crucial information this effort will reveal."

Cleft lip and palate are among the most

common birth defects, affecting about 1 in 700 babies. It occurs when a baby's lip or mouth does not form properly during pregnancy, leaving a gap that can make it hard for the child to eat or speak. In about 70 to 80 percent of cases, the cause is believed to be due at least in part to genetics, but other factors, such as smoking during pregnancy, can also contribute to the chance of having a child with cleft lip or palate.

"In addition to looking at variations in genes that might lead us to treatments, we're also looking for answers for parents who have a child with a cleft and want to know if any future children are at risk," said principal investigator Eleanor Feingold, Ph.D., professor of human genetics and senior associate dean at Pitt Public Health. "This project will help us improve genetic counseling so we can tell parents if their family is predisposed to cleft lips and palates or if it's a genetic aberration that is highly unlikely to happen again."

Dr. Marazita has studied cleft lip and palate since the 1980s, building a database of almost 6,000 families with the condition. The research team will mine that database for appropriate "trios" – mother, father and child with cleft lip or palate – who will have their whole genomes sequenced to find the variations that caused the child's cleft. This will allow researchers to determine if the child's cleft was from a variant

passed along by one of the parents or if it arose spontaneously.

Pitt will provide DNA samples for 430 trios to the McDonnell Genome Institute at Washington University in St. Louis for sequencing. In about three months, the information will come back to Pitt for analysis and will be shared through a centralized data repository.

"We're expecting to get more than 200 terabytes of data back. It takes a village to do this kind of work, and we are eager to tackle it," said Dr. Marazita.

"About two dozen co-investigators and major collaborators at institutes nationwide, including the University of Iowa and Johns Hopkins University, are assisting us."

The Gabriella Miller Kids First Research Act – named for a girl who died of brain cancer on Oct. 26, 2013, at the age of 10 after working to raise support for research into childhood illnesses – amends the U.S. tax code to allow the NIH to direct the funding of \$12 million in pediatric research projects each year for the next 10 years.

Additional co-investigators from Pitt on this project include Elizabeth Leslie, PhD, Seth Weinberg, PhD, Alexandre Vieira, DDS, PhD, and Manika Govil, PhD, of the School of Dental Medicine, and John Shaffer, PhD, of Pitt Public Health.



Please join us to support dental medicine scholarships, recognize distinguished alumni and enjoy an evening at Phipps Conservatory.

16TH ANNUAL Dean's Scholarship Ball

**Saturday, April 2, 2016
6 p.m.**

Phipps Conservatory

Tickets are \$200 per person for this black tie event, and seating is limited.

For more information, or to make your reservation, please contact **Ms. Nancy Poe** at poen@pitt.edu or **412-648-8910**

2016 Distinguished Alumni

Dr. Mark W. Ochs (DMD '82)
Distinguished Alumnus Dental Medicine

Dr. David A. Anderson (MDS '84)
Award of Appreciation



We would like to thank our Premier Sponsors: UPMC • EDIC • PNC • United Concordia

Dental Alumni Association Celebrates Diversity and Welcomes Prospective Students

Developing a Diverse Support Network Requires Input From Every Group

The School of Dental Medicine Dental Alumni Association sponsored a reception for the School of Dental Medicine community in October at the University Club. Dr. Christine Wankiiri-Hale (DMD '02), Assistant Dean for Student Affairs, welcomed alumni, current students, residents, faculty members and several applicants to the DMD program to come together, share their stories and build relationships. Those in attendance also discussed how to continue improving the diversity and inclusion initiatives at the school, and the achievements they have made in regards to enhancing diversity and inclusion in the dental profession.

The school was proud to host guest speaker, Ms. Paula Davis, Assistant Vice Chancellor for Diversity for the University of Pittsburgh Schools of the Health Sciences. Representatives from the Dental Alumni Association, Dental Admissions Committees, Dental Hygiene program,

Diversity Committee, and Promotion Committee were all in attendance to support the school's efforts. Also among the many alumni in attendance was Dr. David Anderson (MDS '84), who has been a long-time trailblazer and continued supporter of diversity and inclusion initiatives at both the School of Dental Medicine and the University.

Dr. Elizabeth Bilodeau, director of admissions and chair of the Pre-doctoral Admissions Committee, updated attendees on how the school has been actively engaging in increasing and retaining a diverse student body. Under the joined direction of Dr. Thomas Braun, Dr. Bilodeau, and Dr. Wankiiri-Hale, the school has been working on engaging alumni and students in mentoring relationships and fostering a diverse culture to promote leadership within the dental profession.



“We need the input of individuals with varied cultural perspectives, varied value systems, and varied approaches to problem solving if we are to have a fighting chance of providing access to quality dental care for all.”

—Paula Davis, Assistant Vice Chancellor for Diversity



From left to right: **Sruthi Satishchandran**, Class of 2018; **Dr. Elizabeth Bilodeau**, Associate Professor and Director of Admissions, **Dr. Braxton Henderson** (DMD '15); **Dr. Paula Davis**, Assistant Chancellor for Diversity; **Dr. Christine Wankiiri-Hale** (DMD '02), Associate Dean for Student Affairs; **Ms. Arielle Forbes** (Class of 2017); and **Dr. David Anderson** (MDS '84).



Honoring Our Past and Shaping our Future

The University of Pittsburgh School of Dental Medicine Pavilion at Salk Hall has been completed. The new facility, shared with the School of Pharmacy, opened its doors to faculty and staff in May 2015. This important addition is the school's largest expansion since the dedication of the Salk Hall Annex in 1967, and provides an additional 23,000-square-feet dedicated almost entirely to ongoing research at the School of Dental Medicine. The facility will be home to new, state-of-the-art laboratories enabling us to continue to attract and retain top researchers and clinicians from across the world.

The atrium features a prominent donor display wall, the **DNA Donor Display**, identifying the many individuals who support the School of Dental Medicine

The DNA Donor Display Campaign will continue into the middle of 2016.

To learn more on how to support the School of Dental Medicine or the research taking place at the School, please contact Mr. Paul Casey at **412-383-7544** or **pbc8@pitt.edu**.



There is still time to support the school and become part of this outstanding opportunity.

You still can be included in the **DNA Donor Display** and have your name listed among your fellow alumni in support of all programs at the School of Dental Medicine. Donors who have contributed **\$10,000, or more** between 1997 through the end of this campaign in 2016, will be included on the display.

2015 Donors of Distinction

Dr. Orest Balytsky
(DMD '94, Endo '98)
and Dr. Natalia Balytsky

Dr. Elizabeth A. Bilodeau
(Oral Path '11)

Dr. Terry L. Buckenheimer (DMD '80)
and Mrs. Karen Pesce
Buckenheimer

Mrs. Vaseleke H. Constandy

Mr. James Cornelius

Mrs. Nancy Cornelius Baserman

Dr. Bernard J. Costello

Dr. Jacqueline Sohn Costello
(DMD '97)

Dr. Richard J. Doerfler (DMD '86;
MDS, Ortho '89; MS, Dent Anat '93)
and Mrs. Jane L. Doerfler

Dr. Guy S. Fasciana (DMD '71)

Dr. David A. Foreman
(DMD '79, Prostho '81)

Dr. Paul Foreman (DDS '45)

Dr. R. Kent Galey (DMD '71)
and Dr. Karen Roche Galey

Dr. Joseph A. Giovannitti Jr.
(DMD '77, Anesth '79)

Dr. Jerald A. Grotstein (DMD '71)
and Mrs. Roberta Grotstein

Dr. Theresa A. Heaton (DMD '05)

Dr. A. Paul King
(DMD '68, Anesth '71)

Dr. Edward L. Korenman (DMD '78)
and Mrs. Jansue R. Korenman

Dr. Robert S. Laurenzano (DMD '72)
and Mrs. Loriann Laurenzano

Dr. Nicholas K. Long (DDS '65)
and Mrs. Jane S. Long

Dr. Felix Mabunay (DDS '62)
and Mrs. Guinevere R. Mabunay

Dr. William A. MacDonnell
(Anesth '78)
and Mrs. Margaret MacDonnell

Dr. Oren H. Moore (DDS '38)
and Mrs. Sarah K. Moore

Dr. John H. Musey (DDS '37)
and Mrs. Dolly Musey

Dr. Arnold Peace (DMD '86)
and Mrs. Nora Peace

Dr. Heiko Spallek
and Dr. Gisela Spallek

Mr. Jeffrey W. Sterling

Summer Smiles

Dr. Edward Korenman, a 1978 graduate of the School of Dental Medicine and his wife Jan made a gracious and substantial donation to develop Summer Smiles. Dr. Korenman, a part-time faculty member in the Department of Pediatric Dentistry, made the gift to support an annual August one-day event to give free care to children. The first Summer Smiles was held on August 21, 2015. The program provides free exams, cleanings, fluoride application and radiographs to patients who participate in the annual Give Kids a Smile Days here at the school. Summer smiles also is open to other uninsured children and adolescents in the metropolitan Pittsburgh area.



Dr. and Mrs. Korenman

Dental Alumni Association Board Members

We extend a warm welcome to our returning and new Dental Alumni Association Board Members for 2015-2016.

New board members include: Dr. Rachel Eglash (DMD '03), Dr. Joe Ross (DMD '83), and Dr. Katelyn Woods (DMD '12). Dr. Woods, who is currently employed at UPMC Children's Hospital, passed the second part of her board certification of the American Board of Pediatric Dentistry in October was married in November. Dr. Eglash is a practicing general dentist in Squirrel Hill and enjoys traveling with her husband and children. Dr. Ross practices in New Castle, is active in organized dentistry, and recently announced his candidacy for President-elect of the Pennsylvania Dental Association (PDA).



Pictured left to right: Dr. Katelyn Woods (DMD '12), Dr. Matt Karski (DMD '10), Dr. Lisa Babb (DMD '11), Dr. Rachel Eglash (DMD '03), Dr. Christine Wankiri-Hale (DMD '02), Mr. Paul Casey, Dr. Joe Ross (DMD '83), Dr. Stephen Miloser (DMD '83), Ms. Julia Burner (DH Class of 2016), Ms. Susan Ban (DH '80), Ms. Arielle Forbes (DMD Class of 2017), and Dr. Mara Mangini (DMD '11). Also pictured: Bella and Max.

Recently a large gift from the estate and in memory of Dr. Paul Foreman (DDS '45) was made to the School of Dental Medicine.

Dr. Foreman was a Pittsburgh native from the Hill District. He earned both his undergraduate and DDS degrees at the University of Pittsburgh. He practiced general dentistry in Squirrel Hill for 10 years before joining the U.S. Navy. Upon returning to Pittsburgh after his service, he continued his dental career for another 40 years in Oakland. He was a life-long supporter of education, public health, and the School of Dental Medicine.

His son, Dr. David Foreman, is also an alumnus of the School of Dental Medicine, and earned his DMD in 1979 and Certificate in Prosthodontics in 1981. Representing the Foreman family, Dr. David Foreman chose the Herman and Dorothy Berman Scholarship fund to direct his fathers gift in support of decreasing the financial burden placed on future students in attending the School of Dental Medicine. The Foreman and Behrman families have a unique connection: Dr. Paul Foreman was a classmate of brothers, Dr. Stanley Behrman (DDS '45) and Dr. Larry Behrman (DDS '46). Years later, both of their sons, Dr. David Foreman and Dr. David Behrman (DMD 80), attended the School of Dental Medicine together.

The Herman and Dorothy Behrman Scholarship fund, founded in 1989, supports deserving first-year dental students.

To learn more about supporting scholarships at the School of Dental Medicine, please contact Mr. Paul Casey at **412-383-7544**.

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WINTER 2016

Calendar of Events



February 2016

February 2016

**Health Sciences Foundation
Winter Academy**

February 17

**Palm Beach at the
Mar-a-Lago Club**

February 19

Naples at the Ritz-Carlton

Naples The Pitt Alumni Association will host a breakfast event at the Ritz-Carlton before Winter Academy.

For more information, please contact Paul Casey at **412-383-7544**

March 2016

March 2

Dental Alumni Association (DAA) Executive Committee Meeting and Board of Directors Meeting

5:00 p.m.

457 Salk Hall

March 2

Student/Alumni Networking Event, Fourth-Year Students

6:00 – 7:00 p.m.

Room 458 and 457 Salk Hall

Please email Nancy Poe at **poen@pitt.edu** if interested in attending.

April 2016

April 2

Sixteenth Annual Dean's Scholarship Ball

6 p.m.

Phipps Conservatory

April 9

Twenty-Second Annual Bowser Memorial Continuing Education Lecture Series

Innovative Periodontics:
Creating Success in
Today's Dental Practice
Samuel B. Low, DDS, MS MEd

8:30 a.m. – 1:00 p.m.

Scaife Hall

To register go to **dental.pitt.edu/ce**

DAA Annual Business Meeting

Immediately following
Bowser Lecture

May 2016

May 20

Senior Luncheon and Senior Awards Ceremony

11:30 a.m.

University Club

May 21

School of Dental Medicine Diploma Ceremony

1 p.m.

Heinz Hall

June 2016

June 9

Pitt Dental Hygiene Alumni Reception at the ADHA Annual Session

5:45 – 7 p.m.

Omni William Penn Hotel
Lawrence Welk Room,
Mezzanine Level
Pittsburgh, PA

Please join us for wine and hors d'oeuvres to renew friendships and find out what's new at your alma mater.

Please RSVP by May 25 at **dentalalumni@dental.pitt.edu**. For more information, please contact Angie Riccelli at **412-648-8399**.



University of Pittsburgh

School of Dental Medicine

Office of the Dean
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3501 Terrace Street
Pittsburgh PA 15261-1933

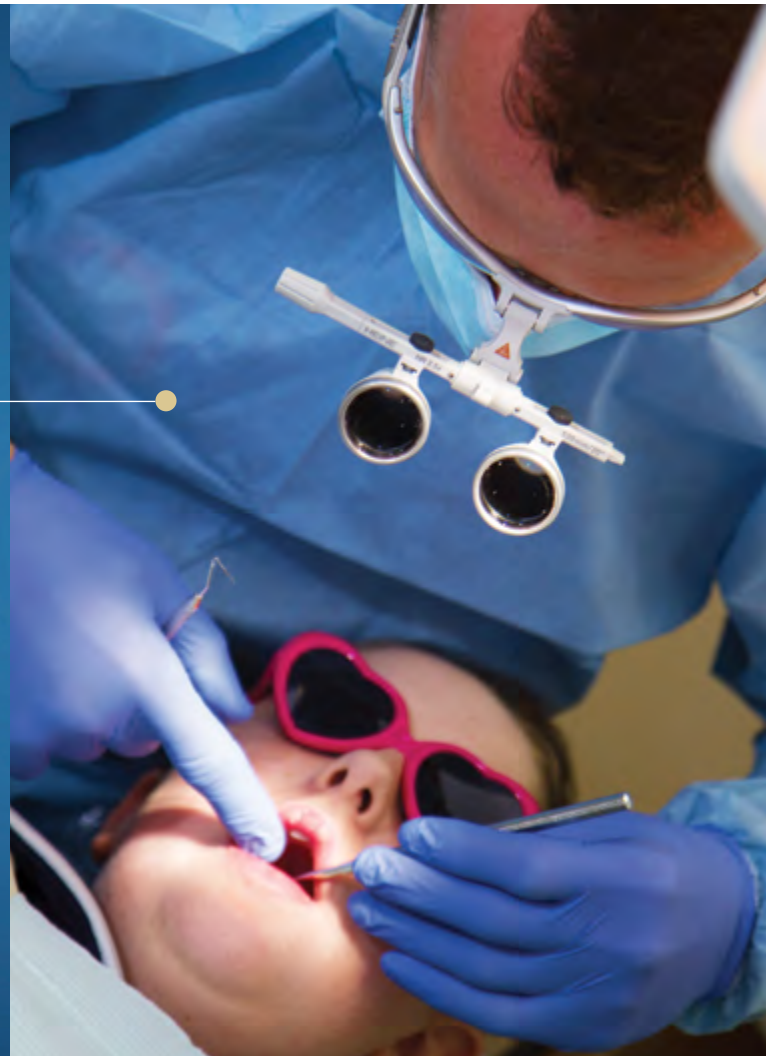
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Supporting Pennsylvania dental students couldn't be easier.

Dr. James Desetti (DDS '52), along with fellow alumni from Pennsylvania, established the **Keystone Dental Student Endowment Fund** to assist students from the commonwealth with their dental education expenses.

If you have an interest in supporting this fund, or to learn how you or your class can establish an endowed scholarship fund, please contact Mr. Paul Casey at **412-383-7544**.

For your convenience, you can make your donation online at **dental.pitt.edu/make-gift**, or **use the envelope enclosed** in this issue of *Pitt Dental Medicine*.



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