GRADUATION 2013

A Closer Look at the Department of General Dental Sciences
I’m pleased to report that progress on the Dental School building expansion featured in the most recent issue of Dental Images continues to go well.

I would like to again express my sincere gratitude to all who have supported this initiative. On page 13, you can read about one of our major donors for the expansion, Dr. and Mrs. Jeffrey Moos, and what inspired them to generously support the expansion with a $1 million dollar gift. (In the last issue, we profiled Dr. Rick Kushner, who also supported the expansion at the million-dollar level.)

With the physical expansion progressing, we thought it would be interesting and educational to take you, our readers, on a “tour” of the Dental School — not physically, but intellectually. The school’s operational structure represents a collection of faculty and staff organized primarily within four major departments: General Dental Sciences, Surgical Sciences, Developmental Sciences, and Clinical Services.

This issue of Dental Images kicks off our “tour,” with a cover story that explores the largest and most complex of our four departments: General Dental Sciences. (The next three issues will feature cover spreads about the school’s other major departments.)

The stories in our cover spread represent a broad spectrum of teaching and research interests of the Department of General Dental Sciences faculty. We take a closer look at the initiatives of our dedicated senior faculty as well as highlighting the work of our newer and younger faculty members.

For example, did you know that for more than 50 years, we have had on our faculty one of the nation’s top forensic odontologists, Dr. L. Thomas Johnson? As Dr. Johnson nears retirement later this year, he’s putting the finishing touches on research that applies hard science to determine whether bite-mark analysis can be useful as evidence in criminal cases. Another long-time faculty member, Dr. Gerald Ziebert, has stepped down as director of our Graduate Program in Prosthodontics, leaving it in the capable hands of Dr. Geoffrey Thompson. But fortunately for our “Grad Pros” students, Dr. Ziebert is not ready to retire and will remain to continue to impart decades of wisdom, technique and expertise to those who pursue this specialty.

On the “less-senior” end of the spectrum, you will meet Dr. Soni Prasad and learn about her passion to restore order to the way implant treatment planning is taught and carried out, see what prolific researcher and gifted educator Dr. David Berzins does to engage his young students in the topic of dental biomaterials, and read about why Dr. Amir Seifi — one of the department’s youngest full-time faculty members — is determined to develop a comprehensive oral cancer screening for use in dentists’ offices.

For all of these faculty members, the pursuit of meaningful research and the opportunity to shape and influence curriculum development are two richly rewarding aspects of their academic careers. We are pleased to be able to share their pursuits with you, and we consider our students very fortunate to observe, learn from and work alongside these committed and talented individuals. We wish to acknowledge our outstanding part-time faculty as well, who come to Marquette so engaged and ready to share their pragmatic knowledge and expertise for the benefit of our students.

We hope you enjoy your brief intellectual tour highlighting several aspects of the Department of General Dental Sciences.

Dean William K. Lobb, D.D.S., M.S., M.P.H.
The Department of General Dental Sciences:  
Department Chair: Dr. Gary Stafford

Full-time faculty: 21  
Part-time faculty: 79

Courses and content for MUSoD’s pre-doctoral program:
- General dentistry  
- Prosthodontics and biomaterials  
- Oral medicine and diagnostic services

Two graduate programs:
- M.S. in Dental Biomaterials - Two years  
- M.S. in Dentistry (Prosthodontics Residency) - Three years

In this four-part series, Dental Images will explore each department within the Marquette School of Dentistry, spotlighting unique aspects, dynamic faculty and key initiatives.

Under the direction of Dr. Gary Stafford, the Department of General Dental Sciences is the Dental School’s largest department in terms of full- and part-time faculty members.

“Departmentally, we strive to pull all specialty areas into our comprehensive care delivery system and teach the students how to leverage specialist resources while learning how to lead and direct the professional team,” Stafford explains.

For the faculty, Stafford has outlined certain core values that guide departmental excellence and advancement. These values place priority on maintaining curricular excellence, open communication about innovation, to sustain the school’s leadership; consistent and unbiased assessment methods; and strong support for faculty, as it is critical to their commitment.

“Marquette Dental School is a special place,” Stafford says. “It’s as simple as that. Our faculty members, both full and part time, are the source of our strength and success.”

The study’s scientific protocol

Johnson and Radmer have taken great care to follow the scientific process at every stage of their work. To create the bite marks in a blind study, they used 50 randomly selected models from the SSD sample dentition patterns of volunteer from the armed services, obtained when the researchers were studying outlying characteristics. They collaborated with 3M Corp. to create three-dimensional scans of the dental stone models they already analyzed so that 3M, using stereolithography, could prototype the models in a sufficiently hard resin material.

To actually make the marks, they mounted the models to a device which would standardize the replication of the patterns. Their biomedical engineering colleague assisted in developing and calibrating a sensor to record the number of pounds of pressure and the bite duration, so this could later be compared to the degree of injury. The device was bridged to a computer and a software program to systematically record the data.

But what did the researchers bite?

“The closest thing to human skin is pig skin,” Johnson explains. “We had to have living tissue, as cadaver tissue doesn’t respond in the same way.” It’s like

Veteran professor L. Thomas Johnson caps multi-faceted career

Final project aims to bring a scientific process to bitemark analysis

Can bite marks in human skin provide valid evidence in criminal cases? Forensic odontologist and longtime MUSoD Adjunct Professor L. Thomas Johnson, D ’61, believes they can — under the right circumstances and if the scientific method is applied. Before he retired on September 30 after 53 years of teaching at Marquette, Johnson is working to establish a basis for applied science when comparing bite marks to a particular person’s dentition.

Johnson has been working for more than 10 years, aided by a series of three previous research awards, to bring hard science to bitemark analysis. In 2008, he and MUSoD Adjunct Assistant Professor Tom Radmer published a scientific paper that demonstrated characteristics of human dentition could be quantified and expressed statistically based on seven dental criteria, including tooth width, rotation and displacement.

Now, Johnson, Radmer and Dental Informatics Director Tom Wirtz are collaborating with Professor Dean Jeutter in Marquette’s Department of Biomedical Engineering, as well as Dr. Joseph Thulin, director of the Biomedical Research Center at the Medical College of Wisconsin, on a three-year project to develop a protocol, including computer applications that will enable an accurate, reliable and repeatable way to evaluate bitemark patterns. The National Institute of Justice (NIJ) awarded a $715,000 research grant to the group for the project in late 2010 — the largest grant the Dental School has received to date.

“It’s not an identification, where you’re individualizing,” Johnson explains of his work. “It’s showing that certain characteristics of teeth are outliers, and when you see one of these, you can eliminate a great percentage of the population. And if you see a second one, or a third one, then it’s not likely that very many people in the world are going to have teeth like that.”

The value of forensics

As one of only two board-certified forensic odontologists in Wisconsin (the other is Dr. Donald Simley, D ’76, a former student of Johnson’s), Johnson is a renowned expert in this small field. He became interested in pathology during dental school, and began studying the forensic applications after graduation, attending the Armed Forces Institute of Pathology. Although he went into private practice as a general dentist, Johnson was recruited by Marquette the same year he graduated to teach in the dental school's pathology and fixed prosthodontics departments.

Though it is a much smaller part of the DDS curriculum today, Johnson says it’s key for students to gain basic knowledge of application of dental science in forensics.

“It’s an important part of their education. Not only with regard to dental identification, but also the importance of detailed dental records, progress notes of what you did and what you told the patient to do, and diagnostic-quality x-rays in respect to meeting the standards for patient care,” Johnson says, adding that detailed record-keeping can also be extremely helpful in cases of identifying crime or disaster victims through dental records.

Johnson’s experience in this area spans several decades, during which he served as a consultant to the Wisconsin Department of Justice’s crime lab and served as an associate medical examiner in the Milwaukee County Medical Examiner’s Office.

The most notable and notorious case he worked on was that of serial killer Jeffrey Dahmer, as part of a multi-disciplinary team that successfully identified 15 of Dahmer’s victims within one week of their discovery.

Of the crime work, he says, “When dental students express interest, I tell them ‘You’re not going to earn a living doing this. It’s a public service, and a professional satisfaction because only a dentist can do it, but it’s not something that you do full-time.”

“Hopefully once the paper is published, it will stimulate somebody to come along and say, ‘Huh! I can do better than that!’” he says. “Science evolves because of criticism.”

“A Closer Look: The Department of General Dental Sciences

Dr. L. Thomas Johnson, D ’61

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DENTAL IMAGES

DENTAL IMAGES
A SUBJECT of SUBSTANCE
BIOMATERIALS remains a key strength at Marquette

Dr. David Berzins will tell you, in a wryly understated way, that dental biomaterials is not every predoctoral student’s favorite topic. It’s inspired him to get creative in his lecture approach.

“I have Fergie (from hip-hop group The Black-Eyed Peas) introduce the topic of amalgam by splicing together letters from her song, ‘Glamorous,’” says Berzins, who came to MUSoD in 2003 as an assistant professor and director of the school’s graduate program in dental biomaterials. When students hear the familiar voice singing, “A-M-A-L-G-A-M,” it tends to get their attention, and they’re more likely to glean some wisdom from Berzins, whose vast expertise is continually expanding through research.

“He’s the most prolific researcher I have in the department,” says chair Gary Stafford of Berzins, noting that staying current is critical, as the field tends to evolve rapidly.

Berzins is responsible for providing biomaterials-related content to a number of predoctoral courses, including those that cover preservation and restoration of tooth structure, clinical restorative procedures and oral health. Engaging the students — whether through pop culture references, everyday examples or even physical demonstrations with Silly Putty — is one of Berzins’ talents.

Although it has become a smaller part of the predoctoral curriculum, Stafford emphasizes that a fundamental understanding of biomaterials is “a critically important piece of becoming a dental professional.”

Amy Zelko, D1 and 2016 class liaison, agrees. “To provide the best possible care for your patients, you should be informed about the best material to use for different situations, or the pros and cons of alternative materials.”

Graduate studies

For any students that do find themselves highly engaged in biomaterials, MUSoD offers a two-year master’s program. Started in 1956, it is one of very few programs focused strictly on the fundamentals of materials science and its use in dentistry and dental materials.

“Our is not a clinical program, but one that focuses on classroom instruction coupled with laboratory and research experience,” Berzins says. “The students conduct a research project and either write a master’s thesis or have a first author, peer-reviewed article accepted.”

The graduate program typically enrolls between one and three students who go on to varied careers, including prosthodontics or other advanced training.

MUSoD’s commitment in this area is ongoing. Berzins says biomaterials is one of the Dental School’s research strengths, and that many faculty, both veteran and new, have a strong background in the area.

Berzins, who is not a dentist but has a background in materials science and biomedical engineering, is involved in a number of research projects with graduate students across departments, including orthodontics, endodontics and prosthodontics, in addition to his biomaterials graduate students. Recently, his research has involved evaluating properties of newer nickel-titanium endodontic files, investigating the elasticity and force delivery of esthetic composite orthodontic wires recently debuting in the market, and studying setting reactions of resin-modified glass-ionomers commonly used in restorative dentistry.

Along with extensive research, Berzins is known for his diligence in staying current and keeping his lectures up to date. “It does take some effort,” he acknowledges, “because every week, every day, there are new products out there.”

ORAL MEDICINE & DIAGNOSTIC SERVICES
Screening for a deadly disease

Professor developing comprehensive oral cancer risk assessment for use in dental offices

With low general public awareness and no comprehensive program to opportunistically screen for the disease in the U.S., oral cancer has sustained an historically high death rate due to late-stage discovery.

More than 42,000 Americans will be diagnosed with oral cancer in the next year — and only slightly more than half will be alive five years from now, according to the Oral Cancer Foundation. Too often, oral cancer is first discovered when the cancer already has metastasized to another location, such as neck lymph nodes.

But if caught early, oral cancer is highly treatable. Data from the Oral Cancer Foundation shows that when found at early stages of development, oral cancers have an 80 to 90 percent survival rate.

One of MUSoD’s newest and youngest full-time faculty members, assistant professor Dr. Amir Seifi, is working to design a comprehensive risk-assessment tool for dental practices that could make a significant difference in early detection.

“The dentist is the first-line practitioner who can help with early diagnosis of oral cancer, and I can tell you confidently, based on the research that’s out there, that oral cancer screening and risk assessment is not being done the way it should be done in general dental practices,” says Seifi, who came to Marquette in January of 2012, after completing his Ph.D. in oral medicine at the University of Washington in Seattle.

In assessing general awareness and understanding of oral cancer, Seifi has confirmed a lack of both. “It’s very minimal with respect to risk factors, signs and symptoms, and with respect to the role of general dentists in diagnoses and treatment,” Seifi says.

In developing a risk-assessment tool appropriate for all dental patients, Seifi also aims to incorporate it into the students’ curriculum and use it with patients who visit the Marquette clinics.

An easy yet accurate risk assessment

Seifi’s vision is to have an assessment form appropriate and effective for every new patient a dentist sees. He points out that risk assessment is currently done for caries and periodontal disease, so why not oral cancer?

Designing the form, however, is not as simple as it may sound. “It has to be complete, so you can get the right information...
motion on the spot, yet it has to be easy and quick for the patients," Seifi explains. "We don’t want it to be too long, something that can be filled out within about 90 seconds or so."

In addition, Seifi notes, a meaningful scoring system is key. The idea is that dentists could assign a score that categorizes patients as being at high, medium or low risk for oral cancer. The problem here, Seifi explains, is a lack of data. Although there are known risk factors for oral cancer, such as smoking, drinking alcohol, and having certain strains of the human papilloma virus (HPV), the factors often overlap. For example, a person with poor oral hygiene, a weaker risk factor, is also more likely to smoke.

Capturing accurate responses on the risk-assessment form is another thorny issue. Seifi points out that women are more likely to answer truthfully than are men when asked about, for example, the number of drinks they have per week (heavy drinking alone, even in a nonsmoker, is a known oral cancer risk factor). A patient’s socio-economic status can also affect response accuracy. With the help of his colleagues, Seifi is currently refining a draft of the form.

Screening in practice
Seifi directs the predoctoral courses in Oral Medicine and Diagnosis 1 and 2 and instructs students in the diagnosis and treatment planning processes. He says the next step would be leveraging the assessment tool with Marquette clinic patients. Right now, oral cancer screening is not being done on a protocol basis in the clinics. Seifi says, “It’s been done sporadically, on an individual basis, and not in a comprehensive way.” Patients may be asked about their smoking habits, or older patients may be evaluated more thoroughly, but Seifi would like to see standardized screening for every patient.

“The idea is that if oral cancer screening is part of students’ experience with patients in school, they will be more likely to implement the risk assessment when they are in practice.”

“We have a great patient base at Marquette, so it is really helpful when you want to do this kind of clinically based research,” Seifi says. “We have a strong opportunity to make an impact.”

Thompson took reins from Ziebert in mid-2012, but rather than retiring, Ziebert has stayed on as a full-time faculty member. Teaching and interacting with students, Ziebert says, “makes me want to get up every morning and come down here. This is a good place for me.”

“We change lives”
Thompson and Ziebert are assisted by 10 part-time faculty members. The two or three students who enter graduate prosthodontics each year find a rigorous program with intensive lab work requirements and complex patient cases. Recently, graduate students also began surgically placing implants, a treatment that Thompson says has revolutionized prosthodontics and generated increased interest in the field.

Technically challenging cases from the Marquette clinic typically find their way to Thompson’s department. Often the patients have long histories of dental issues, or other health issues that can further complicate the case, but he says his colleagues and students are committed to finding solutions.

“We don’t just fix teeth and put teeth in holes where they are missing. We change lives,” Thompson says. “The way patients describe the course of their care here is unbelievable. It’s always, ‘You guys cared about me as a person, you listened to me and you helped me.”

During National Prosthodontics Week in April, the graduate students presented to residents and staff with some impressive “before” and “after” examples of their work. One case involved a 20-something woman missing most of her adult dentition. In partnership with a local oral surgeon, the students did some sophisticated surgery to build bone strong enough to retain implants.

Another resident was recently recognized for his work looking at how changes in the vertical dimension of occlusion might affect smile shape or occlusion. "There are aspects of prosthodontic dentistry which can be the most lucrative part of your practice," Thompson says. "Single crowns, bridges. Marquette has always been known as a strong restorative school, so I know that's helped make a lot of people successful." One successful graduate is Dr. Jesse Smith, D’03, Grad ’06. After completing Marquette’s graduate prosthodontics program, Smith spent time in private practice in Milwaukee and Madison, and is now on staff at the Milwaukee VA Medical Center, which attracts a steady stream of patients in need of prosthodontic treatment.

Smith says he was inspired to pursue prosthodontics by Marquette faculty, including Ziebert, who obviously loved what they did. Now in the process of becoming board certified and planning the curriculum for the VA’s prosthodontics residency program, Smith is finding that same joy in his own work. “Every day, I can strive to achieve better results, critique myself on how I could have done better, and learn something new,” he says.

During Smith’s final year in the graduate program, he remembers, he asked Ziebert for some assistance in preparing a full arch with 14 crowns. “He sat down and started prepping teeth, and his hands were as steady as anything I had ever seen in my life,” Smith recalls. “I thought, ‘This guy is the pinnacle of perfection.’ That is when I really knew, it takes that next level [of skill] to be a prosthodontist. He’s always been a mentor figure to me, as far as his involvement in professional organizations, as well as giving back through his teaching at Marquette."
Restoring Order
Marquette evolves approach to teaching implant treatment planning

Some say the root of any success is a well-considered plan. Dr. Soni Prasad subscribes to that philosophy.

Prasad, assistant professor of prosthodontics, came to Marquette in late 2010 with her own bold plan to enhance students’ education around implant treatment planning, both at the graduate and pre-doctoral levels.

Changing trends in dental education with regard to dental implants require pre-doctoral graduates to be competent in patient assessment, diagnosis, comprehensive treatment planning, and replacement of missing teeth by fixed, removable and dental implant prosthodontics. This increasingly places treatment planning responsibility in the hands of the restorative practitioner.

Guided by a vision of the final result — replacement of the missing tooth — the restorative dentist devises the treatment plan and provides direction to the surgeon to ensure that the implant is placed optimally to ensure successful restoration.

“We want the students to start by thinking about the missing tooth first and how they want it positioned in the oral cavity,” Prasad says. “It’s like the foundation for a building. We first have to envision the location and architecture of the building in order to know where to lay the foundation. Once we know the location and orientation of the missing tooth, we can request our surgical colleagues to place the implants to appropriately support the tooth.”

In addition to mastering implant treatment planning that involves surgical collaboration, Prasad also wants students to be able to handle simple implant cases from start to finish. The Dental School’s curriculum committee in December approved Prasad’s plan to incorporate a more comprehensive, simulation-based, interdisciplinary approach to teaching implant dentistry at the pre-doctoral level.

“My target is for this to be incorporated at both the preclinical and clinical levels,” Prasad explains. “I want the students to be exposed to two or three simple implant cases, like restoring a single implant crown, or two-implant-supported overdenture. This will make them comfortable with the whole treatment process and give them an understanding of basic implant planning, surgery and restoration.”

Prasad has already begun implementing this more comprehensive approach at the graduate level, having set up a surgical suite for graduate prosthodontics residents to surgically place implants. “As prosthodontic residents, they already have a good background of treatment planning complex implant cases, so why not give them the experience of placing the implant as well? It is an accreditation requirement for the residents to participate in all phases of implant treatment, including implant placement.”

Prosthodontic residents are now involved in treatment planning and placing implants in their newly set up surgical suite under Prasad’s close supervision.

Aiming to support the concept of restorative-driven implant treatment planning, Prasad is embarking on a research project that looks at implant longevity and function in Dental School patients. She is building a database, and eventually will follow up with the patients to review the implant health and look for any correlations with implant survival and functionality.

“If we are to build a restoratively driven implant program here at school, we need to know what we have done so far, how well it worked and what we could do to improve our treatment,” Prasad explains. “It will help generate a lot of clinical questions and motivate our students to look for answers, which encourages them to get involved in small research projects.”

Expressing appreciation for the encouragement of MUSoD’s administration and her faculty colleagues, Prasad says the school has been very supportive of her work.

“When this implant curriculum is in place, it’s going to be a very robust program,” she says. “Marquette is such a good place to be working on this, because it shares the same vision as I do — to be at the cutting edge, to be at the forefront.”

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Since September 2007, the Oral Health Partnership (OHP), she and her colleagues help operate an oral health program for Green Bay School District children who are uninsured and qualify for the free or reduced lunch program or are on medical assistance.

“I like being there for people who say, ‘I have nowhere else to go,’” says Sigl, who worked in private practice before realizing her passion for public health. “This is what dentistry is to me.”

The OHP’s board of directors is chaired by Dr. Jim Van Miller, D’70, who received the School of Dentistry’s 2013 Outstanding Dental Service Award.

OHP dental professionals travel with portable equipment to high-risk schools and provide a range of services, including dental exams and diagnosis, X-rays, cleanings, topical fluoride treatments, sealants, composite fillings, stainless steel crowns, and extractions. The organization also operates a fixed-site dental clinic at the Howe Community Resource Center and a clinic at the Salvation Army Kroc Center, both in Green Bay.

In 18,000 restorative and preventative care appointments last year, OHP staff treated more than 6,000 patients — totaling $45 million in free services.

“According to teachers, principals and social workers, the OHP has made a huge difference in absences,” says Executive Director Carrie Stempski, noting that children who otherwise would have had to go to the emergency room to be treated for minor ailments like toothaches, likely resulting in a full missed day of school.

Since September 2007, the OHP has provided over 25,000 dental visits to more than 12,000 patients.
Each spring, Marquette University sets aside one weekend to honor alumni who represent the heart, soul and spirit of Marquette. Hundreds of alumni and guests come to campus to celebrate the accomplishments of the year’s Alumni National Award recipients — a chance to hear stories of how they are making a difference in the lives of others. Alumni National Awards Weekend culminates in a black-tie event honoring the All-University Award recipients. This year, Marquette honored seven recipients, including the Dental School’s own Kathy Roth.

Dental School Honorees

Peter J. Polverini, Arts ’69, D ’73
Ann Arbor, Mich.
A respected researcher and scholar who assumed presidency of the American Association for Dental Research in March 2013, Dr. Polverini has studied how the growth of blood vessels relates to cancer and chronic inflammatory diseases. Since 2003, he has been dean of the University of Michigan School of Dentistry, where he also is a professor in the Department of Periodontics and Oral Medicine.

James L. Van Miller, D ’70
Green Bay, Wis.
Dr. Van Miller recently retired after 40 years practicing pediatric dentistry, but that hasn’t stopped him from helping kids achieve the sense of self-esteem that comes with a bright smile. He is board chairman of the Brown County (Wis.) Oral Health Partnership, a program that provides dental services to needy children in the Green Bay school system. He is also a long-time member of the Dean’s Advisory Council for the Dental School.

Kathy Roth, D ’74
West Bend, Wis.
Kathy Roth was this year’s recipient of the all-university Service to Marquette Award. The award recognizes alumni who have demonstrated distinguished leadership and service to the school. It’s difficult to imagine a more passionate advocate for Marquette. Roth co-chairs the School of Dentistry’s Building for the Future Campaign and served on the Dean’s Advisory Council. But her leadership isn’t limited to campus. She was also the first female president of the Wisconsin Dental Association and only the second female president of the American Dental Association.
Jadwiga Hjertstedt, MS ’97, was published in the January issue of Gerodontology: "Investigating the impact of a Community-Based Geriatric Dentistry Rotation on Oral Health Literacy and Oral Hygiene of Older Adults." She also presented a poster, "Utilization of Dental Professionals in Nursing Education" at the 2013 National Oral Health Conference in Huntsville, Ala., in April.

Leo Huck, D ’07, was appointed by the Governor to the Wisconsin Dental Examining Board.

Jerome M. Teclaw, D ’81, has been reassigned as an Individual Mobilization Augmentee for Dental Informatics and Technology at Defense Health Headquarters, Falls Church, Va. Previously he served as Chief-Dental Services at Scott Air Force Base for the 932d Air Wright Wing.

Reid Wycoff, D ’05, MS ’12, co-authored an article with David Berzins, Associate Professor, which was published by the Journal of Endodontics in August 2012, Volume 38 no 8.

Dr. Richard L. Rech, D ’53, learned as a boy that keeping his hands busy with artistic pursuits such as building model airplanes could get him out of doing chores. “I made sure to stay busy my whole life!” he says. While in private practice in the Milwaukee area, Rech took up wood carving as a hobby. His first project was to painstakingly replicate a Concord stage coach, which he says took about 1,500 hours over the course of 15 years. He still has this 40-year-old masterpiece. He also carved a number of horse-drawn carriages and some traditional Native American figures before turning his attention to American soldiers. “The soldiers got kind of interesting, and I wound up with about 80 of them,” Rech says, adding that he enjoyed replicating the various uniforms, doing the research, and perfecting his craft. In 2009, Rech, a U.S. Army veteran, donated his entire soldier collection to the Milwaukee County War Memorial Museum, where it remains on display.

**Small-town practice yields big rewards for Jeffrey Moos**

Jeffrey Moos with his wife Beth, PT ’79, and Marquette University President Rev. Scott Pilarz, S.J.

In the small Wisconsin town of Mondovi — population less than 2,800 — Jeffrey Moos, D ’83, has found satisfaction and success, personally and professionally. At Mondovi-based Midwest Dental, a large group practice with 113 offices in eight states, Moos has worked his way up from staff dentist in 1983 to Chairman and Chief Dental Officer today. (He also served 11 years as Midwest’s president and CEO, and recently transitioned from that role to focus his efforts on the clinical side of the business.)

“While I maybe didn’t originally intend to establish myself in a small rural town like Mondovi, I would be a really vocal advocate for the rewards that come with being a dentist in a small town,” says Moos, a native of suburban Milwaukee. “It just carries with it a different level of reward and responsibility. As a dentist in a small town you’re viewed as a professional leader in the community, but it’s really the ability to build strong relationships with the people that you call patients that creates the reward. I like going to a football game or a community event, and having my patients all around me.”

Midwest Dental’s offices are in larger cities as well as smaller towns and rural communities, offering a variety of general dental care for patients of all ages. In the less populated areas, Moos says, Midwest has often filled a significant gap in dental care. Moos distinguished himself early on at Midwest Dental, taking on an early role as clinical director and staying on after a large group dental practice consolidator bought the company in 1996. “The opportunity for Moos and two business partners to purchase Midwest came in 2001, and since that time, the company has experienced significant growth, more than tripling in number of locations and expanding its geographic presence.

Moos says he was drawn to a career in dentistry as early as high school. “My uncle [Ronald Moos, D ’67] is a Marquette alumnus and a dentist,” he says, “and I could see he enjoyed what he did. Also, I was a pretty artistic kid, I enjoyed working with my hands, and I saw that as an attractive part of dentistry.”

Moos selected Marquette for his undergraduate studies in biology, hoping it might help him get into the Dental School. His decision paid off in more ways than one, as he met his wife, Beth Moos, PT ’79, the very first day of orientation and married her during his third year as a dental student.

The couple have been generous supporters of MUSoD, most recently donating $1 million toward the school’s expansion. They were recently added to the Archbishop John Martin Henni Founders Society, which recognizes generous Marquette donors. Moos is the first Dental School alumnus inducted.

Moos notes many reasons he and Beth support the school. “Marquette has been a big part of our lives,” he says. “My Marquette undergraduate and dental education helped shape my leadership skills, as well as my passion for dentistry and exceptional patient care. It provided me with the professional basis to start my career. This is a way of hopefully giving others that same opportunity.”

He believes the school’s expansion will help attract and retain top faculty and provide a more up-to-date educational offering for students. He also appreciates the fact that the school will be able to train more dentists.

Two of those future dentists are Moos’s sons, Bill (D3) and Greg (D1). “It’s fun for Beth and me to watch their development,” Moos says, adding that he gets a kick out of Bill and Greg’s text updates about their latest endeavors and accomplishments in the clinic. Those, he says, always bring back memorable moments.

Whether the boys join their father at Midwest Dental remains to be seen, but Moos is confident their Marquette experience will serve them well. “As a Marquette dentist, you’re highly respected by others in the profession,” Moos says. “I’ve always felt that being a Marquette dentist is something special. I want that same kind of respect for the institution to be carried into the future.”
After graduation, Becky Warnken, D’13, is flying south. During her time at Marquette, she embraced Milwaukee and learned to endure the winters. But Tampa, Fla., is home, where her parents still live and where her husband has found work, so that’s where she plans to begin her dental career.

Warnken’s extensive involvement in the American Student Dental Association (ASDA) has not only augmented her education, but may have helped her get a job. As an ASDA trustee this year, Warnken sat on the ADA Council on Access, Prevention and Interprofessional Relations (CAPIR) as a student representative. The CAPIR chair, a private practitioner in Milwaukee, was an MUsD alum who helped connect Warnken with her fellow alums and contacts in Tampa.

Warnken’s involvement with ASDA began during her D1 year when she was asked to help out with Marquette ASDA’s annual Vendor Fair, and from there, she says, “it just kind of snowballed.” She traveled to Chicago for a regional meeting to learn more about the organization. “Immediately, I knew that it was something I wanted to be a part of, that it was important to my profession and that I would want to have it in my life down the road,” she says. She was elected vice president of the Marquette chapter as a D2, and served as president during her D3 year.

In 2008, MUsD became an “auto-enroll” school, meaning ASDA membership dues are built into students’ tuition, something Warnken supports.

“ASDA gives you opportunities to network that I wouldn’t have otherwise known about, and those relationships have been important throughout my dental school career, and will continue to be important in my practice.”

Because she helped run the conference, Warnken has been asked to plan the second annual ASDA National Leadership Conference, ensuring that her involvement in ASDA will continue post-graduation. She will also continue on ADA’s CAPIR, and is already a member of the Florida Dental Association.

Warnken admits that the trustee role did cut into clinic time in her D4 year, with frequent travel for meetings and conferences, but says both Dean Lobb and her group leader were “extremely supportive of my involvement, as long as when I was at clinic, I was getting things done,” she says. “I think I’m blessed for the emphasis Marquette puts on organized dentistry. Otherwise, I could not have been nearly as involved, and I don’t think I would be as ready as I am for private practice if it weren’t for those opportunities.”
Where are our grads going?

Percentage of Wisconsin residents staying in Wisconsin*: 78%
*likely to increase when students return from military or graduate training commitments

Percentage of out-of-state residents staying in Wisconsin: 28% (up from an average of 10-15% in past years)

Number of students entering public service (Federally Qualified Health Center, National Health Service, Community Health): 7

Number of students going into the military: 4

Number of students going into graduate programs: 10

Orthodontics 4
Prosthodontics 1
Endodontics 1
Oral Surgery 1
Periodontics 1
Pediatric Dentistry 2

Number of students going into post-graduate programs (AEGD): 2

Jeremy Winter, Rafael Soltero, Dr. Lauren Rackham, Tyler Beinlich, Kevin DeGroot

Asma Ahmed, Kevin Curtin, Kaitlyn Darcy, Kyle Everson, Sarah Graesser, Joseph Flack, Kathleen Boland

Sarah Blair shows off her three dimensional cap decoration.

Jeremy Winter, Rafael Soltero, Dr. Lauren Rackham, Tyler Beinlich, Kevin DeGroot

Anushree Mehrotra, Dallen Ricks, Kyle Krueger, Brian Sperber, Casey Sidders, Rebecca Warnken, Sarah Graesser, Madeline Anfang

William Buchholtz, Pedro Ochoa, Leonard Johnson, Daniel Goldberg, Jon Ireland

Jeremy Winter, Jaffrey Sindelar, Tyler Beinlich, Bryan Keefe, Benjamin Romensko, Kyle Krueger, Brian Sperber, Maxwell Meinard, Daniel Goldberg

Asma Ahmed, Kevin Curtin, Kaitlyn Darcy, Kyle Everson, Sarah Graesser, Joseph Flack, Kathleen Boland

Kyle Everson, Benjamin Romensko, Michael Urbaitis, Tyler Beinlich, Maged Bishara, Michael Nick, Jeremy Winter
The graduates (and their decorated caps) gather before marching into the Commencement Ceremony.

Members of the class of 2013, led by Asma Ahmed, are congratulated by faculty, mentor and family hooders as they leave the Hooding Ceremony.
FACULTY AND STUDENT ACCOLADES

Dr. Thomas “Gerry” Bradley’s article, “Changes in Orthodontic Treatment Modalities in the Past 20 Years: Exploring the Link Between Technology and Scientific Evidence,” was published in the April/May 2013 issue of the Journal of the Irish Dental Association. Dr. Bradley is professor and chair of Developmental Sciences; director of Predoctoral Graduate Programs in Orthodontics.

The February 2013 issue of The Journal of Prosthetic Dentistry featured an article by Dr. Aaron Cho, assistant professor, Department of General Dental Sciences, titled “Mirror-Image Anterior Crown Fabrication with Computer-aided Design and Rapid Prototyping Technology.” Congratulations to Dr. Timothy Hart, adjunct associate professor, General Dental Sciences, for advancing to the semi-final round of the 2013 Wisconsin Technology Council’s Business Plan Competition for his concept of providing anatomically contoured implant-healing abutments on a custom basis prior to surgery.

Dr. Dawei Liu, associate professor, Department of Developmental Sciences/Orthodontics, was awarded a $1,500 research grant at the 2012 International Research Poster Session sponsored by the Marquette University Office of International Education for Dr. Liu’s project, “The Mechanism of Dentine Pulp and Induction/Vacuum-Pressure Casting Procedures.”

The Marquette chapter of the Student National Dental Association (SNDA) is presenting the 2013 Oral Cancer Walk/Run on Saturday, September 21. Along with the 5k run/3k walk, there will be a short presentation on oral cancer screening. All are welcome to attend. For more information contact jennifer.sinnen@marquette.edu.

MUSoD students Tyler Quinn, Timothy Gainey, Andrew Welles, James Kolstad and Michael Stangler have been selected to participate in the 2013 Red Bull Flugtag in Chicago. The competition requires each team to provide a story-line and build a flying machine. The MUSoD group are superhero dental students helping the tooth fairy who has lost his wings. Follow their progress on Twitter (@ffsmiles) or Instagram (ffsmiles). Their submission video is posted on the MUSoD Facebook page. If you are in the Chicago area, come out and see them compete on September 21.

The following students were inducted into the Alpha Sigma Nu, the Honor Society of Jesuit Institutions of Higher Education, on April 6, 2013. From the class of 2013: Linnea Morton and Ashley Sorenson. From the class of 2014: David Hamm, Paul Lundine, Elizabeth Minard, Nicholas Russo and Katherine Stahr.

FACULTY PROMOTIONS

Congratulations to Dr. Lisa Koenig and Dr. Christopher Okunseri on their promotion to the rank of Professor. These promotions are effective July 1, 2013.

Dr. Paul Luepke has been appointed chair of the Department of Surgical Sciences after serving as interim chair since 2009. His appointment became effective in March.

ALPHA SIGMA NU INDUCTEES

The following students were inducted into the Alpha Sigma Nu, the Honor Society of Jesuit Institutions of Higher Education, on April 6, 2013. From the class of 2013: Linnea Morton and Ashley Sorenson. From the class of 2014: David Hamm, Paul Lundine, Elizabeth Minard, Nicholas Russo and Katherine Stahr.

Research Day

MUSoD’s Student Research Day provided students with an opportunity to showcase their current research initiatives. The annual event held in February featured oral presentations by current faculty members, including a keynote address from Dr. Arthur Hefti, a poster session and vendor displays.

The following are this year’s Research Day award winners:

Dental Students

Luisa Campos
Judson Smith
Jon Crow

Residents Group 1
Manika Patwari
Nick Valeri
Jacob Szendro

Residents Group 2
Himanshu Sharma
Christopher Kingma
Steven Koutnik

Faculty Award
Geoffrey Thompson

Congratulations to the 2013 inductees into Omicron Kappa Upsilon

(Lef to right): D4 student Kevin DeGroot; honorary member Dr. David Berzins; faculty member Harshit Aggarwal; and D4 students Lauren Montoure Teske, Ashley Sorenson, Sarah Graesser, Carissa Molina, Kaitlyn Darcy, Sarah Blair, Brandon Syme and Michael Nick.
DOLLARS AND SENSE
NOTES FROM THE SCHOOL OF DENTISTRY DEVELOPMENT OFFICE

SCHOLARSHIPS

There is perhaps no greater form of giving back to the Marquette University School of Dentistry than by supporting scholarships. Investing in the future of MusDoD and its students symbolizes your commitment to ensuring that Marquette continues to be one of the country’s top dental educational institutions.

Dental school has always been expensive, but gone are the days when a summer or part-time job could make up the difference. Few students can afford the full cost of dental education. The average debt of a Marquette dental student upon graduation is more than $200,000, and the prospect of taking on this burden may send qualified students looking elsewhere for their professional dental education.

Scholarships are a significant factor in recruiting top scholars. These high-caliber students enhance the reputation of the school, which aids in recruiting and retaining top faculty. Scholarships empower academically talented men and women to overcome the financial obstacles to saying “yes” to a hard won acceptance letter from the Dental School.

TYPES OF SCHOLARSHIPS

• **Endowed** - An endowed scholarship fund is a permanent investment in Marquette School of Dentistry’s students and its future. With a gift of $50,000 or more, you can establish a named, endowed scholarship fund. The university invests the principal for long-term growth, and a portion of the annual return is spent to aid students, according to the parameters you determine in your scholarship agreement.

• Immediate Impact – Immediate impact scholarships are gifts from donors that address the immediate needs of current and incoming students. They are generally spent in the fiscal year they are received. Donors can give any amount to support immediate impact scholarships.

Ways to establish an Endowed or Immediate Impact Scholarship include:

- **Cash gift**
- **Multi-year pledge of up to five years**
- **Stock transfer**
- **Planned gift**

If you are interested in starting your own scholarship fund, or perhaps one for your class, or supporting an existing named scholarship, please contact the development office.

BUILDING FOR THE FUTURE

As you read in the last issue of Dental Images, construction has begun on our expanded dental facility. Thanks to the generosity of our alumni and friends, we are on track to open and begin teaching this fall.

Exciting opportunities remain as we now shift our focus toward procuring the equipment and technology that will allow us to maximize the potential of our expanded facility.

Have you made your gift/pledge yet? Can we count on your support as we “Build for the Future” of Marquette’s dental school? Naming opportunities are available, and those who give at least $50,000 will receive recognition on the Donor Wall. Pledges can be made over a period of up to five years.

If you are interested in making a pledge or learning more about the expansion, visit http://www.marquette.edu/dentistry/building-for-future-dentistry/ or contact the development office.

ENDODONTICS PROGRAM

Marquette University School of Dentistry’s Endodontics Program has a proud history of accomplished graduates and esteemed faculty. Since 1981, the program has produced exceptional endodontic clinicians at the graduate level while increasing the degree of specialty expertise among pre-doctoral students.

Dean William Lobb and School of Dentistry leadership are committed to the continual improvement of the Endodontics Program. To keep residents current on the latest technology and practice methodology, we must replace and upgrade equipment and furnishings.

We are currently testing the feasibility of a fundraising initiative to support investments in upgraded fixed-mount surgical microscopes, sensors, and electro-torque and endodontic motors.

As home to Wisconsin’s only graduate endodontic program, Marquette plays a critical role in defining the specialty standard of care in the state. The program’s reputation both in Wisconsin and elsewhere hinges on the caliber of its graduates. Thus, alumni around the globe, and non-alumni endodontists in Wisconsin, have a vested interest in continuing our tradition of excellence.

This project comes at an important transition point for the program. This investment will make Marquette a more competitive destination for new faculty and strengthen the program’s position for the pending accreditation. Further, the momentum of our successful expansion project makes this an ideal time for a substantial capital investment in this specialty program.

If you would like to support this effort or you have questions, please contact the development office.

ORTHODONTICS PROFESSORSHIP - UPDATE

Funding for the Dr. Russell T. Kittelson Endowed Professorship in Orthodontics has reached 75% of our $1 million goal. We need your help to put us over the top. With an endowed professorship, the annual spendable portion of the funds will be used to retain or attract quality faculty members to the department. The endowment will be a source of permanent funding.

There are many ways one can support the initiative, including multi-year cash pledges, stock transfers, and a variety of planned giving options. If you would like to send you a pledge form, would like more information, or are interested in meeting with someone from the Orthodontics Department, please contact the development office.

IS IT YOUR REUNION YEAR?

If you graduated in a year ending in a 3 or 8 (such as 1968 or 1983), this year marks your class reunion at Marquette Dental School. The reunion will take place the evening of Saturday, September 21.

Past reunion classes have made contributions both to demonstrate class pride and to ensure the school can continue to provide students the best possible dental education. In a friendly competition among reunion classes this year, the School of Dentistry will honor the class that raises the most funds.

The winning class will be recognized by Dean Lobb at the reunion dinner and listed on a plaque hung prominently at the School. Contributions can be made to the expansion campaign, class or named scholarships, or to upgrading technology to meet student needs.

DEAN’S CIRCLE RECEPTION

The Ninth Annual Dean’s Circle Recognition Reception will be held from 6 p.m. to 8 p.m. Friday, September 20, 2013 in the Robert & Judith M. Sullivan Atrium at the School of Dentistry. The Dean’s Circle recognizes donors who have made a gift of $1,000 or more in the last fiscal year.

More Information

If you have questions or need additional information on how you can support the School of Dentistry, contact the development office:

Senior Director of Development Dave O’Neill, david.oneill@marquette.edu, 414/288-6048
Assistant Director of Development Teresa Janusz, teresa.janusz@marquette.edu, 414/288-7693

If you would like to support this effort or you have questions, please contact the development office.
IN MEMORIAM
The Marquette University community joins in prayerful remembrance of those who passed away between January and June 2013. May the souls of the faithful departed rest in peace. Eternal rest grant unto them, Lord, and let perpetual light shine upon them.

On February 21, 2013, Marquette University School of Dentistry lost a friend and long-time faculty member in Dr. Ronald Mahn, D'53, taught part-time at the dental school for 55 years. He was a teacher, friend and mentor to generations of dental students, including two of his sons, Paul, D’84, and Daniel, D’88. His loss will be felt by all whose lives he touched.

Patricia L. Hackett died December 10, 2012. Pat had worked full-time at the School of Dentistry as the Patient Financial Services Coordinator since 2002. Her strong commitment to serving our patients and students, as well as her School of Dentistry colleagues, was the driving force in her daily work. Her role for service extended beyond the school, as she was involved in charitable work in dentistry, participating in a medical/dental mission trip that brought health care supplies and dental care to the villages in Guatemala and Mexico.
DID YOU KNOW...

• As part of the Dental School expansion project:
  • 16,000 cubic yards of dirt was removed from the site and 350 trucks carrying 2,500 cubic yards of concrete was brought to the site.
  • The structure required 215 tons – or 430,000 pounds – of reinforcing steel.
  • 20,000-some feet of PLB piping (plumbing system) has been installed with more than 4,000 fittings.