

A scanning electron micrograph (SEM) showing a dense cluster of spherical, yellowish-green bacteria with a textured surface. These bacteria are situated within a complex, red, fibrous structure that resembles biological tissue or a dental material. The background is dark, highlighting the intricate details of the bacteria and the surrounding structure.

Mdental

FALL 2013

UNIVERSITY OF MARYLAND SCHOOL OF DENTISTRY

Waging War on Deadly
Bacteria

MESSAGE FROM THE INTERIM DEAN

As the holidays approach, I am reminded of all the things for which I am thankful. I am especially thankful for my family—my wife Beth and three wonderful children—Gregory, Jessica and Patrick, but I am also thankful for my School of Dentistry family—the outstanding team of students, faculty, staff and alumni whom it is my privilege to serve as interim dean. Together, we will shape the future of dentistry.

We will build on our stellar reputation and continue to enrich our educational programs, translate technology into skilled practice and create an environment where everyone can collaborate and grow. We will provide world-class education, research and patient care guided by our core values: knowledge, excellence, leadership, civility, diversity, collaboration and accountability.

I look forward to getting to know more of you. I hope you will enjoy getting to know each other a little more as you peruse the fall issue of *Mdental*. Whether you read about one of our alumni like David Axelrod, DDS '13, who entered the military after graduation to serve our country; or Al Warren, DDS '69, who started a dental clinic in a Florida church; or one of our diamond scholars students like Sayo Adunola, DDS '14, who is treating patients alongside residents, you will learn something new about the terrific people who are a part of our school.

Our faculty is no less impressive. Our cover story features award-winning research by Mark Shirtliff, PhD, on the development of a vaccine against biofilm infections like MRSA. You may also read about Drs. Liang, DDS '98, and Block, DDS '58, who volunteer their time and talents to help our students as part of the Dean's Faculty program.

I am thankful for each of these inspiring individuals and the positive impact they have on our school.

Best wishes for a safe and happy holiday season.



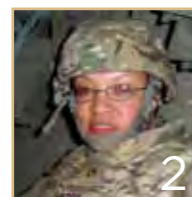
Mark A. Reynolds, DDS '86, PhD
Interim Dean



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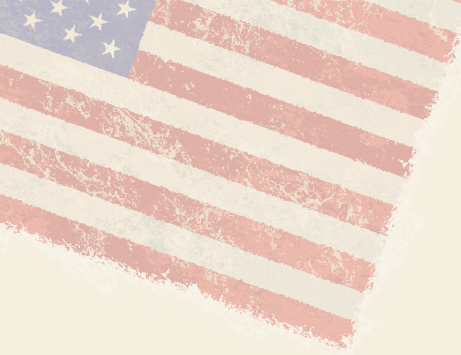
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Serving with **Pride**



2

David Axelrod on active military duty

GRADUATES LOOK FORWARD TO MILITARY SERVICE

For four recent graduates of the University of Maryland School of Dentistry (UMSOD), providing dental care is more than a job—it has become their patriotic duty. Kevin Adams, DDS '13, David Axelrod, DDS '13, Jason Barrett, DDS '13, and Krystal Burns, DDS '13, will use their dental training to serve the country as members of the U.S. military.

The four students symbolically joined the military ranks during a ceremony after graduation on May 13, 2013. They each took an oath emphasizing their dedication to the protection of American freedoms. The students join thousands of dentists who provide treatment for soldiers in the U.S. Army, Navy, Air Force, Coast Guard, Marines, Reserves and National Guard.

David Axelrod, currently a captain in the U.S. Army Dental Corps, looks forward to carrying on the proud tradition of Army dentistry. After completing the basic officer leadership course at Fort Sam Houston in Texas, he will begin a one-year advanced education in general dentistry residency at Fort Benning in Georgia. His Army service has already taken him to Hawaii and Washington, and he is excited for the opportunity to see different parts of the world while serving his country. "I joined the military because I want to serve and give back to a country that has given me and my family so much. It is an honor to volunteer for service," Axelrod says.

Jason Barrett, a lieutenant in the U.S. Navy Dental Corps, was inspired to join the military to see the world and serve his country. Barrett grew up in a Navy family, so joining the Navy was a natural step for him. He enjoys the structure of the military and looks forward to performing a wide range of dental procedures throughout his service. Barrett is currently in San Diego completing a general practice residency and hopes to be accepted into an oral-maxillofacial residency through the Navy. "The military really emphasizes good

treatment of patients. Serving is also a way for me to get four or five years of practice under my belt, so that I can build up my speed and be more successful in private practice," states Barrett.

Joining the military has been a goal for Capt. Kevin Adams since he was a 10-year-old playing soldier. He is excited to fulfill his dream by entering active duty in the Air Force. Adams attended officer training school at Maxwell Air Force Base in Montgomery, Ala., and is currently completing an advanced education in general dentistry residency at Barksdale Air Force Base in Shreveport, Ala. His primary duty will be performing general dentistry, but he

will also be called on to assist with disaster relief and participate in military and community events. Adams hopes to deploy to Osan Air Force Base in Korea next year. "While serving in the military, I'll have a chance to pay back my country for all it has given me, and I will have ample opportunity to continue my education and have a great experience. I'm looking forward to making a difference," Adams remarks.

The four graduates who entered the military ranks this summer join a large network of UMSOD alumni who have served in all branches of the armed forces.

ALUMNI REFLECT ON MILITARY CAREERS

Elizabeth Oates

For Elizabeth Oates, DDS '00, serving in the military has been a life-changing experience. After spending several years treating soldiers at Aberdeen Proving Grounds in Maryland as a contractor, she decided to sell her dental practice in 2011 and join the Army. Several months later, after she completed the officer training program, Oates deployed to Kandahar, Afghanistan, and was assigned to a military hospital where she provided dental care for U.S. soldiers, coalition troops and working dogs. Working dogs are used in combat for search and rescue work, patrolling and detecting traps. "When I got there, I hit the ground running," Oates states.



Elizabeth Oates deploys to Afghanistan onboard an Army airplane.

Performing dentistry in unpredictable conditions kept her alert. The military dental clinic was open seven days a week, and Oates was often on call in case of emergencies. "I never knew when a situation would occur that would bring us an influx of patients. Every day was different and nothing was guaranteed to happen the same way," states Oates.

[continued on p. 4]





Dental graduates take an oath to protect American freedoms at a ceremony honoring their decisions to join the military.

After spending six months overseas, Oates returned home in August, 2012. Despite the challenges she faced, the long days and high stress were worth it. Oates considers the experience one of the most rewarding in her life. She continues to treat soldiers at Fort Meade full-time, but now has a new appreciation for their sacrifices. “It made me feel good that I could do my part while I was there. These soldiers put their lives on the line everyday and they

don’t complain. That’s something that I’ll never forget,” she concludes.

Steve Mescher

Steve Mescher, DDS ’80, never considered a military career until his final year in dental school. During a month-long externship at a Coast Guard base in Miami Beach, Fla., Mescher enjoyed learning from his mentors so much that he decided to join the Coast Guard after graduation. In October 1980, he was commissioned as a lieutenant in the U.S. Public Health Service attached with the U.S. Coast Guard.

Mescher recalls the struggles he faced as a new officer. Having his hair shaved off by a military barber, living in a barracks and learning to march and salute all contributed to culture shock for a young man with no military experience. “It’s not that easy in the beginning. You have to accept a lot of other people into your life all of a sudden and instantly conform to their ways,” he remarks.

However, Mescher knew he had made the right choice during his first assignment on Governor’s Island in New York Harbor. Working in a high-tech dental clinic, he learned a great deal about oral surgery and crown and bridge treatments. For Mescher, leaving New York was bittersweet, but that is one of the challenges of Coast Guard life—constant reassignments. He has lived and worked in Florida on three different assignments and also in Washington, D.C., New London, Conn. and Ketchikan, Alaska. While pulling up roots every few years was challenging for Mescher and his family, it had professional advantages. “You meet new dentists and they teach you new tricks. The learning is constant; you are consistently increasing your repertoire of materials and techniques,” he states.

During his career, Mescher rose through the ranks, eventually becoming a captain and the chief of health services at several different Coast Guard clinics. He faced the daunting task of ensuring that a diverse group of Coast Guard members and their families received the medical and dental care they needed. Though he recently retired after 28 years with the Coast Guard, Capt. Mescher is proud of his accomplishments. “It was very rewarding. I knew I was serving my country with an outfit that was recognized for outstanding service,” he concludes. 🍷



HISTORY OF DENTISTRY IN THE MILITARY

Enlisted dentists provide vital services to soldiers in all branches of the military. However, official military dentistry is barely 100 years old; dentists were not authorized to serve as military officers until 1901. Before the turn of the 20th century, soldiers were responsible for seeking their own dental treatment.

The need for military dentists became a serious issue during the Civil War. Thousands of potential recruits were turned away because, due to the absence of available dental care, they lacked six opposing upper and lower front teeth. Both Union and Confederate soldiers needed these 12 teeth to bite off the ends of paper gunpowder cartridges that they loaded into their weapons.

Forty-six years after the Civil War ended, the U.S. Army Dental Corps was established, making dentistry an integral part of military operations. Trained military dentists improved the oral health and morale of U.S. troops at home and overseas. For example, more than 4,600 Army dental officers provided 70 million restorations during World War II.

Today, each branch of the military contains its own dental corps of general dentists and specialists who serve the oral health needs of troops at home and abroad. Military dentistry has become a critical component of the U.S. Armed Forces.

Orbison Receives Inaugural Alpha Omega Scholarship

Eric Orbison, DDS '14, has been chosen as the inaugural recipient of the Alpha Omega Award. The scholarship was established by the Baltimore Alumni Chapter of the Alpha Omega International Dental Fraternity with a \$100,000 donation to the University of Maryland School of Dentistry (UMSOD). Bradley Trattner, DDS '88, and Adam Eisner, DDS '89, spearheaded the establishment of the scholarship fund.

The Alpha Omega fund will award a \$5,000 scholarship annually to a rising senior dental student who exhibits academic achievement and a commitment to provide dental services to the community. Alpha Omega trustees, along with UMSOD administrators, will select the scholarship recipient each year. "A cornerstone of the Alpha Omega Dental Fraternity is the desire to be of service to the community and encourage the pursuit of academic excellence. We are pleased to be able to provide a yearly scholarship to a rising senior who reflects these values. We congratulate Eric Orbison on being selected as the inaugural recipient of the Alpha Omega Baltimore Chapter Dental Scholarship," says Trattner.

"Scholarships are vital to our ability to help students achieve their dreams of becoming dentists and dental hygienists. Scholarships lessen the financial burden on students and remove barriers to their success. Members of Alpha Omega continue to display their commitment to our school, our students and the profession with the establishment of this thoughtful and important scholarship fund. We are grateful for their support," says interim Dean Mark Reynolds, DDS '86, PhD.

Orbison's love of engineering has inspired him to enroll in an orthodontics specialty program after he graduates from UMSOD next spring. The Alpha



Eric Orbison receives the Alpha Omega Baltimore Chapter Dental Scholarship from trustees Todd Sarubin and Arthur Goldvarg.

Omega award will provide financial support for Orbison as he continues his dental education.

He received the award from Alpha Omega trustees Todd Sarubin, DDS '85, and Arthur Goldvarg, DDS '80, during the Evening with the Stars celebration on May 13. "I'm very grateful to receive this award. This scholarship will be a tremendous help," he remarks.

Orbison, a native of Lewisburg, Pa., decided to pursue a career in dentistry because it combines his talents for engineering with his interest in helping his fellow man. For Orbison, one of the highlights of dental school has been the opportunity to improve the oral health of his patients. He strives to help his patients overcome their fears about dentistry. "If you can effectively communicate a situation to a patient, you can make treatment that much easier. It is a good feeling to treat a patient and know that they fully trust you," Orbison states.

The Alpha Omega scholarship enables the fraternity to continue to make a positive impact at the school, says Eisner. Alpha Omega is a Jewish dental fraternity that was founded in Baltimore more than 100 years ago. The fraternity was established by a group of dental students who sought to combat discrimination within schools. Today, the fraternity consists of more than 90 domestic and international chapters that represent more than 5,000 members.

As alumni of UMSOD, the trustees are excited to support their alma mater and help future graduates become leaders in the dental profession. "It is extremely rewarding to know that the Baltimore Alumni Chapter of Alpha Omega has left an indelible mark and a legacy for future generations of dental students," Eisner states. 🍀





Diamond scholar Sayo Adunola carefully examines a patient's teeth.

Diamond Scholars Program

CHALLENGES TOP DENTAL STUDENTS

A UNIQUE PROGRAM at the University of Maryland School of Dentistry (UMSOD) gives top dental students the opportunity to continue sharpening their skills by taking on even

greater clinical challenges.

The Diamond Scholars Program brings several high-achieving fourth-year dental students into the Advanced Education in General Dentistry (AEGD) clinic, where the students work side-by-side with AEGD residents. The program was founded in 2004 by Professor Douglas Barnes, DDS '83, MS, chair of the Department of General Dentistry. "It started as a way to reward students who are advancing faster than

“ WITH TIME, THE STUDENTS FUNCTION JUST LIKE RESIDENTS. ” We also want to give them a little more

freedom and a clinical environment where they can progress,” remarks Barnes.

Diamond scholars start the one-year program during their fourth year of dental school. At the beginning, they work at the same pace as fourth-year dental students and receive a similar amount of faculty supervision. As the year progresses, faculty members give diamond scholars additional latitude to perform procedures that are more advanced than those they would take on in the predoctoral clinic. For example, diamond scholars use dental lasers, operate CEREC machines, complete cases that include multiple disciplines and perform rotary endodontics. “With time, the students function just like residents. There is a steep learning curve, but they usually perform to that,” Barnes states.

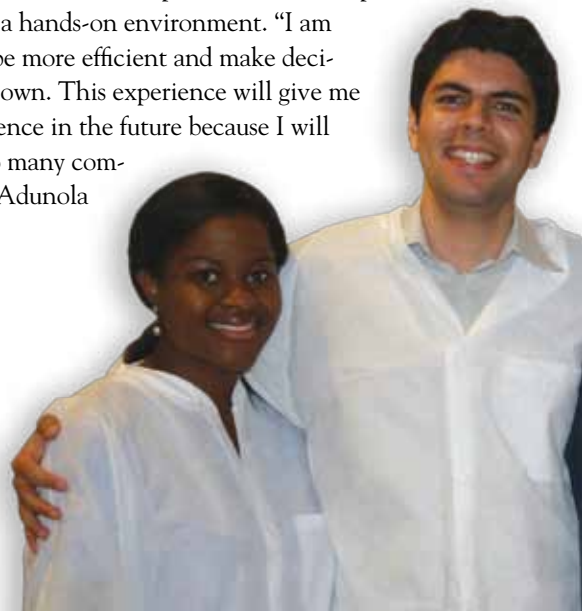
The AEGD residents become mentors for the diamond scholars, providing help and advice as the dental students complete complex cases. The students and residents work hard together and learn from each

other. The productivity of a diamond scholar is more than double the average productivity of a fourth-year dental student, Barnes says. For the past three years, all four diamond scholars have graduated at the top of their class.

Some choose to continue into the AEGD program and earn a certificate, while other diamond scholars select specialties or enter private practice. Whatever dental career they choose, Barnes is confident the program gives diamond scholars valuable training that allows them to become exceptional clinicians. “The Diamond Scholars Program prepares the students for private practice. In addition, it prepares them to enter specialty programs and it gives them an exceptional overall experience in general dentistry,” he says.

Peter Newton, DDS '14, decided to apply for the Diamond Scholars Program because he thought it would provide him with a strong foundation for a postdoctoral residency in the U.S. Army. He enjoys the independence of the program, but feels challenged by the heavy workload and complicated cases. “The best learning tool the program offers is the sheer amount of dentistry I am able to perform. My favorite part has been learning new techniques from a wide variety of faculty members,” remarks Newton.

After entering the Diamond Scholars Program, Sayo Adunola, DDS '14, felt challenged by the faster pace of patient treatment. She has enjoyed the opportunity to learn about more advanced procedures, like implant dentistry, in a hands-on environment. “I am learning to be more efficient and make decisions on my own. This experience will give me more confidence in the future because I will have seen so many complex cases,” Adunola remarks.



PROFILE

Lisa D'Affronte, DDS '12



TITLE: Assistant General Practice Director

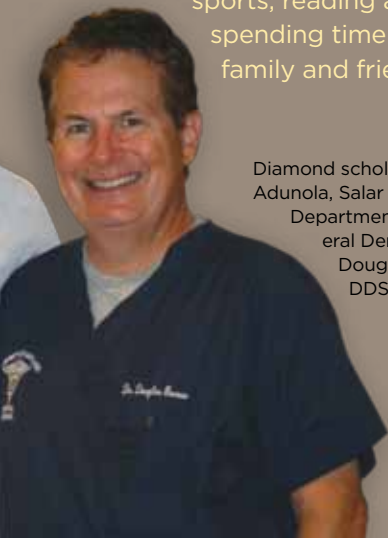
JOINED SCHOOL OF DENTISTRY: July 28, 2013

CURRENT RESIDENCE: Federal Hill, Baltimore

HOMETOWN: Manalapan, N.J.

FAMILY: Husband, Chris Nobis

HOBBIES: running, playing sports, reading and spending time with family and friends



Diamond scholars Sayo Adunola, Salar Sanjari and Department of General Dentistry Chair Douglas Barnes, DDS '83

IN A LITTLE MORE THAN A YEAR, Lisa D'Affronte, DDS '12, has come full circle. The former student and diamond scholar returned to her alma mater on July 28 as an assistant general practice director in the predoctoral dental clinic.

Teaching has always been a passion for D'Affronte, who went to college to become a high school biology teacher. However, after she spent time shadowing her childhood dentist, she developed an affinity for oral health care and decided to pursue a dental career. "I really enjoy the social aspect of dentistry, especially interacting with different people every day," remarks D'Affronte.

She enrolled at UMSOD and, after three years of challenging courses and clinical cases, she decided to push herself even harder and apply for the Diamond Scholars Program. She was accepted into the one-year program, along with three of her classmates. D'Affronte and the other diamond scholars spent their fourth year of dental school working alongside the Advanced Education in General Dentistry (AEGD) residents. They were able to complete more challenging cases at a faster pace than their classmates in the predoctoral clinic. "The faculty supervision is limited, so I became more confident in developing treatment plans for patients without someone leaning over my shoulder," she states.

She was able to place implants and perform surgical procedures during her fourth year of dental school. The privileges, however, came with an additional workload. D'Affronte didn't take time off during the summer and recalls the challenges of studying for clinical boards while she had a full schedule of patients. She appreciated the help, advice and mentorship she received from the AEGD residents. D'Affronte knows the Diamond Scholars Program gave her skills that will be invaluable to her career. "It really strengthened my understanding of the foundations of clinical procedures. I also learned a lot about how to present treatment plans to patients and empathize with their situations," she says.

Now, she will get to apply her clinical skills at her alma mater. The idea of teaching always remained in the back of D'Affronte's mind, but she never expected to get the opportunity to teach so early in her career. As an assistant general practice director, she will oversee third- and fourth-year dental students as they treat patients in the general dentistry clinic. "I'm looking forward to providing students with a positive experience, even if it's just offering them advice or a word of encouragement during their day. I think it will be very satisfying to help students learn," she remarks.

That's not to say that joining the faculty won't be an adjustment. "My professors want me to call them by their first names. I just can't do it. Maybe in time I'll be able to," she quips. 🐾



An Evening with the Stars



Aqdar Akbar
Elizabeth Bauer
Rachel Baylin
Jason Barrett
Jordan Bauman
Tammy Beavis
Brianna Beckmann
Brittany Bergeron
Alexandra Biga
James Buckley

The University of Maryland School of Dentistry honored its top students during an Evening with the Stars celebration on May 13. Students received honors for outstanding achievements in academics, and for their dedication to community service projects. Awards were presented by department and in school-wide categories to the following students:

Robert Buckley
Bryan Chai
Michael Coughlin
Kathryn Cuilla
Adrian Cummins
Mayokun Demehin
Cindy Ding
Caitlin Donahue
Nicole Edwards
Dov Elman
Alexandra Fulreader
Ashley Francois
Jeffrey Gardyn
Christopher Gibson
Joanna Grabiak
Kyle Green
Suzanne Grey
Jnai Grymes

Christina Haifley
Larry Jackson
Rania Khoury
Brett Kingma
Michelle Koilpillai
Gregory Krackowsky
Jacob Labauve
Jessica Lee
Florence Lin
Tina Mahmoudi
Erin Mahoney
Misty Manning
Jason Marrazzo
Elyce Millery
Serena Mitchual
Jessica Moore
Sarah Morad
Katelyn Niu

Dmitry Nurminsky
Ihuoma Nwachukwu
Eric Orbison
Brandy Page
Arpi Patel
Rushi Patel
Vidisha Patel
Maryam Roosta
Susan Seta
Kaitlin Sumperi
Mary Telis
Kaisha Thomas
Selen Tolu
Kristen Watanabe
BeYonne White
Anna Wu
Eric Wu
Brian Zebrick



Top Left: BeYonne White receives The Maryland Dental Hygienists' Association Award

Middle Row (L-R): Rushi Patel receives The American Academy of General Dentistry Award; Kristen Watanabe receives The American College of Prosthodontics Achievement Award; Jacob Labauve receives The American Association of Oral Biologists Award

Bottom: 19 seniors receive Dean's Community Service Awards



2013

PHOTOS BY ADAM ZEWE

GRADUATION & WHITE COAT

White Coat Ceremony *Top Row:* Members of the Dental Class of 2017 and Dental Hygiene Class of 2015 celebrate outside historic Davidge Hall. *Bottom Row:* First-year dental and hygiene students recite the Oath of Dentistry.

Honors Convocation *Middle Row:* Elyce Millery, DDS '13, is hooded by her aunt, Athenia Kelley, PhD; Dental students prepare to line up for the Honors Convocation procession. *Background photo:* Jessica Lee, DDS '13, is hooded by her father, Fred Lee, DDS '83.



STUDENT SPOTLIGHT



The Agninis:



Family Dentistry on a Mission

Dentistry is more than a profession for the Agnini family: it is a mission.

The Agninis strive to accomplish their mission with a combination of compassion and expertise, whether they are providing care for impoverished children in Central Africa, or placing implants for patients in their Lakeland, Fla., practice. For the Agninis—Michael, DDS '72, Matthew, DDS '02, and Andrew, DDS '03—family ties bind them together in a profession that has enriched their lives and strengthened their bonds.

he Foundation of a Legacy

Today, Michael is immensely proud to be in practice with his two sons. Looking back, he never expected things to work out quite the way they did. Michael's father emigrated to the U.S. from Italy before Michael was born. He was a hard-working immigrant and instilled the values of courage and determination in his son. The first in his family to attend college, Michael graduated from Florida State University in 1968. A dental career appealed to him because the profession would enable him to use his skills to serve others. He graduated from the University of Maryland School of Dentistry (UMSOD) in 1972 and later returned to Lakeland to establish a private practice in 1979.

Agnini family outside dental practice (from left): Brooke, Andrew, Mike, Donna, Ashley, Derry, Matthew and Grayson

While he and his wife, Donna, raised their three children—Matthew, Andrew and Ashley—Michael never dreamed that his children would follow in his footsteps. “I was shocked when my sons decided to go into dentistry. I really think this is going to be a legacy that we started. I’m very proud that dentistry has crossed generations in our family,” remarks Michael.

Following in His Father’s Footsteps

When he was a teenager, Matthew never gave much thought to dentistry as a career choice. After finishing his undergraduate degree, he was unsure what path he wanted to pursue. Without a clear future career in mind, he embarked on a six-month Christian mission trip that took him around the world. Matthew witnessed the incredible impact medical and dental providers have on the lives of impoverished people in developing countries. “When I came back, all the

pieces of the puzzle fell into my lap. I realized that I can go into dentistry and have a family while still helping people and being involved in science and medicine,” Matthew states.

He chose UMSOD, in part, because it was his father’s alma mater, and also because he was impressed by the faculty and technology. However, Matthew ended up with more than a DDS after four years in dental school—he left Maryland with a wife, as well. He first noticed Derry, DDS ’04, while she was walking through the clinic. After he gathered the courage to ask her out, they both realized they had a lot in common. The two married after Derry graduated from dental school and then made the move to Michael’s hometown, Lakeland. An Agnini by marriage, Derry soon saw the impact this family has had throughout central Florida. “They’re very respected in the community. Everywhere I go, people ask me,



Mike Agnini treats boy in a Zambian dental clinic in 2006 with his wife Donna.



“Which Agnini are you married to?” Everybody knows the Agninis,” she says.

Matthew and Derry are proud parents of a 2-year-old son, Grayson, whom they are already grooming to become the next Agnini dentist.

Mission Accomplished

The decision to pursue dentistry came to Andrew while he was 8,000 miles away from the family’s Lakeland practice. While Andrew was pursuing his undergraduate degree, he traveled with the family to Zimbabwe in southern Africa on a mission trip. Michael and a team of dental professionals provided care for impoverished children and adults, many of whom were in desperate need of treatment. “I got to see dentistry up close and how it can affect people on a very short-term basis and meet their needs. I experienced how rewarding it can be. That sparked an interest,” states Andrew.

Serving the poor in other countries has been a priority for Michael since he went on his first mission trip in 1991. As his children got older, he began taking them with him on the trips so they could learn about other parts of the world and experience different cultures. His desire to help his fellow man has taken him to Russia, Zimbabwe, Zambia and Ethiopia, as well as many countries in Southeast Asia, South America and Central America. The mission trips are evangelical in nature—Michael and his colleagues share Christian values with their patients. They also leave each patient with a Bible. “We go and tell them that we can help with their pain, for now, which is why God sent us. But really our goal is to help Jesus heal their heart. People understand ‘heart’ in any language. They understand that people have a heart, people have a spirit, people have a soul. They are very receptive to that,” says Michael.

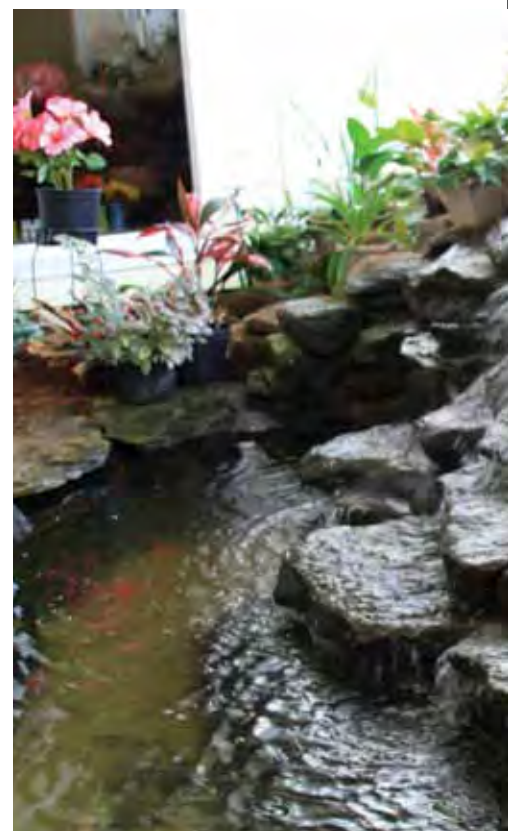
The dental missionaries face numerous challenges when they travel. For example, the electricity is very unpredictable in the Russian orphanages where

Serving the poor in other countries has been a priority for Michael since he went on his first mission trip in 1991.

Michael and his team treat children. They bring mobile dental units and, if the power is working, they can offer a full range

of dental treatments to the orphans. When they visit less developed parts of the world, the dentists usually provide limited treatment, such as extractions. However, the rewards of serving others far outweigh any challenges the team members face.

The rewards of mission work also inspired Michael’s daughter Ashley to pursue a dental hygiene career. The family’s trip to Zimbabwe helped her decide that she wanted a career that would allow her to do mission work. After graduating from the South Florida Community College with a dental hygiene degree, Ashley spent a month in the east-African nation of Ethiopia, helping to establish a dental hygiene school. In a nation of 80 million people, but only 100 dentists, the need for additional dentists and hygienists is immense. Ashley helped train the 17 students enrolled in the first Ethiopian hygiene class, teaching them to use instruments and perform dental cleanings. Later, she returned to Ethiopia and provided treatment for impoverished residents with the help of the newly graduated hygienists.



Practice Made Perfect

At home in Lakeland, the Agnini practice dentistry with that same spirit of serving and supporting their patients. Their state-of-the-art dental office, which opened in 2009, showcases the latest dental technology amid a very unique layout. Each of the office's 10 operatories features a wall of glass that looks out onto lush waterfalls, which are more reminiscent of a spa than a dental office. Patients enjoy listening to the calming sounds of falling water. "It's not uncommon for me to be running a few minutes behind, step into the operatory and say, 'I'm sorry, I'll be with you in a minute,' and find that the patient is actually asleep," quips Matthew.

The waterfalls were built from granite slabs that were original to the site of the new dental office. Preserving the history of the property is important to the Agninis. They showcase old photos of the Lakeland Municipal Airport from the 1930s and 1940s and



Waterfalls have calming effects at the Agnini dental practice in Lakeland, Fla.

Each Agnini has the space to focus on his interest and expertise—Michael concentrates on orthodontics, TMJ and sleep disorders; Andrew and Matthew focus on implant dentistry and IV sedation. Andrew and Matthew are also the team dentists for the Detroit Tigers.

of the U.S. Army Air Corps training facility—the Lodwick School of Aeronautics—which trained pilots during World War II. The Airport Grill, used by servicemen, was located on the same spot as the family's new office.

Since the 6,000-square-foot office opened, the Agninis have had an even easier time practicing together as a family. Each Agnini has the space to focus on his interest and expertise—Michael concentrates on orthodontics, TMJ and sleep disorders; Andrew and Matthew focus on implant dentistry and IV sedation. Andrew and Matthew are also the team dentists for the Detroit Tigers. They provide dental care when the team conducts spring training in Lakeland, and throughout the entire season for the Tiger's 1A farm team, the Lakeland Flying Tigers. They bring their portable dental chairs to the training facility, located just one block from the office, to provide each player with his mandatory dental exam. Major and minor league players who need more extensive dental care visit the Agnini practice. For some players, especially those who grew up in poor areas of developing countries like the Dominican Republic, the brothers provide significant dental treatment.

Working together comes naturally to the Agninis—whether they are placing implants for a major league pitcher, developing a treatment plan for a challenging case or reviewing new technology at a continuing education course. "Practicing together is challenging, like any business partnership would be. But I couldn't imagine having a partnership that wasn't family. Even though you're going to have your spats and your arguments, you always know that they're looking out for you and they have your best interests at heart," Andrew remarks. 🌿



The El Camino Baptist Church in Stuart, Fla. doubles as a dental clinic.

Alfred Warren, DDS '69, Provides Dental Care in an Unlikely Place

IT'S A MUGGY FRIDAY MORNING outside the El Camino Baptist Church in Stuart, Fla. The house of worship is buzzing with activity, yet no church services are being held this morning. The men, women and children walking through the front doors are patients, not parishioners. On weekdays, this church becomes a sanctuary for underserved Stuart residents in need of dental care.

Alfred Warren, DDS '69, established the Christian Community Care Center at the El Camino Baptist Church in 2005. The idea came as a result of a mission trip Warren took to Honduras; a trip where a team of eight dental professionals provided care for poor Hondurans. On the flight home, Warren said to his fellow team members, "We've had a great time doing this in Honduras. Why don't we do this at home?"

Warren wasted no time in making his vision a reality. He collaborated with a local pastor to find a church that was willing to house a dental clinic for underserved patients. Their search led them to El Camino Baptist Church. Warren enlisted a group of volunteers and converted a fellowship hall and several Sunday school classrooms into three dental operatories. A retiring dentist in Ft. Lauderdale, Fla., heard about Warren's plans and donated the entire contents of his practice—five dental chairs, surgical instruments, restorative instruments, hand pieces, etc.—to the fledgling dental clinic.

Each Friday, volunteer dentists provide free fillings and extractions to adults and children who live in poverty. "It doesn't matter what their spiritual positions are, it doesn't matter what their nationality is, it doesn't matter if they are documented or not. All that matters is that they have a financial need," remarks Warren.

Demand for the clinic's services quickly exploded. As more patients lined up for treatment, they shed light on many struggles that poverty-stricken individuals must endure. For example, dental cleanings and fillings are not covered by Medicaid for adult patients; dentists only receive Medicaid reimbursement for extractions and dentures. As a result, many adult patients have been unable to afford the preventive or restorative care that could have saved their teeth.

Warren decided to provide more services to meet this growing need. The clinic now offers comprehensive dental care to patients for modest fees on Mondays, Tuesdays and Wednesdays. The free clinic continues to operate on Fridays. "I thought the Friday morning clinic would be sufficient. It became evident that people needed something more," Warren states.

By charging small fees for comprehensive care, Warren keeps the clinic running as a self-sustaining operation. However, the clinic relies heavily on the support of volunteers, including non-dentists who are committed to helping the less fortunate. For example, a retired electrician runs the autoclaves and sterilizes the instruments. Dentists from across the region give up their Fridays at the beach to spend the day volunteering at the clinic. "Being with people who volunteer is amazing because they are givers. It makes life so satisfying when you volunteer as part of a team," says Warren.

Over the past eight years, the Christian Community Care Center has provided dental treatments for more than 15,000 patients. Warren expects the demand for services to continue growing. "I'm thankful that I have a way of helping people. It really is a tremendous gift that God has given me to be able to serve him by serving other people," he concludes. 🌿





Marc Herman with New York
Islander Hall of Famer Mike Bossy

Marc Herman, DDS '79, Makes Team Dentistry His Goal

WHILE THOUSANDS OF FANS CHEER during the thrilling final seconds of a New York Islanders hockey game, Marc Herman, DDS '79, is watching carefully from the sidelines, ready to spring into action. As the Islanders' team dentist, he must be prepared to treat players who need emergency dental procedures at a moment's notice.

Herman, a native of Baltimore, never took much interest in hockey as a youth. He wasn't introduced to the sport until he relocated to Long Island, after graduating from UMSOD in 1979. He established a private practice in Woodbury, N.Y., and began treating patients during the early 1980s—the same years the Islanders won four back-to-back Stanley Cups. "Everyone on Long Island was Islander crazy. Islander mania was at its peak, so I started following them," he recalls.

As his practice grew, he also began working at North Shore University Hospital, directing the general dentistry, temporomandibular joint disorder, practice management, sleep and sports medicine clinics. Herman also oversees 21 residents at the hospital. Having become an avid hockey fan, he bought season tickets for the Islanders and enjoyed spending time at the games with his three sons, Jason, Corey and Zachary, and his wife, Hillary. He never dreamed he would one day be the dentist for his favorite hockey team. When the team began looking for a dentist who was affiliated with North Shore Hospital, Herman jumped at the opportunity.

He officially became the team dentist last year. Herman is required to attend all 41 home games and provide emergency dental treatment for both the

Islanders players and the visiting team. In addition, he produces mouth guards for the team and provides general dentistry procedures for the Islanders and their families at his Woodbury office.

Performing dentistry during a hockey game is often a thrilling experience for Herman. The Islanders' coliseum contains a state-of-the-art medical and dental clinic next to the locker room, so he has all the equipment he needs for an array of dental procedures. During a game, he is typically called upon to fix broken teeth or cement crowns and bridges that pop out during a rough play. Hockey players are notoriously tough and don't typically let injuries slow them down. "We'll go down to the clinic and suture the player up. Then it's just amazing—they go right back out onto the ice," says Herman.

Emergency dentistry is a vital component of hockey games. Orofacial injuries are common, since players are not required to wear mouth guards. In addition, recent improvements to hockey sticks are causing more pucks to become airborne during play. These airborne pucks pose a huge risk to players' heads, teeth and jaws. "The idea is to address the injury quickly and get them back on the ice as soon as possible. It's an exhilarating feeling because you are always under the gun," Herman remarks.

As a fan, he is excited that the team made the playoffs last year and is hopeful that the young, hungry Islanders will have even more success this season. "I love going to the games and interacting with the players. I'm a fan at heart, but I have to keep that in check because I have to be a professional, whether I am at the office or the coliseum," he says. 🐾

DURING A GAME,
HE IS TYPICALLY
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BROKEN TEETH OR
CEMENT CROWNS AND
BRIDGES THAT POP
OUT DURING A
ROUGH PLAY.



2013



Clockwise:

① Members of the 50-Year Class of 1963 and other Grand Classes celebrate during a special reunion brunch. ② Alumnus of the Year J. Thomas Soliday, DDS '63, with University of Maryland, Baltimore President Jay A. Perman, MD.

③ Alumni enjoy the breeze during a boat cruise through the Baltimore Inner Harbor. ④ Anthony Petito, DDS '93, and his wife, Liza Ward, DDS '93, unwind during the opening reception. ⑤ Eric and Jaime White, DDS '03, on the boat cruise. ⑥ Linda DeVore Dental Hygiene Alumnus Award Winner Pat Mulford, RDH '74 (center) with fellow alumna Barbara Merritt, RDH '81 (left) and Assistant Professor Deb Cartee.



PHOTOS BY ADAM ZEWE AND



Introducing the 2013-2014 Alumni Association Board of Directors President

Guy Alexander, DDS '82, was named president of the Alumni Association Board of Directors at an association meeting during reunion weekend.

A native of Baltimore, Alexander earned his undergraduate degree in biology from Morgan State University. After graduating from the University of Maryland School of Dentistry (UMSOD), he established a private general dentistry practice in Baltimore. Since 1982, he has been an active member of the Maryland State Dental Association and UMSOD Alumni Association. Alexander has also served as president, executive board member and delegate of the Baltimore City Dental Society. Since 2001, he has served the School of Dentistry as a member of the Board of Visitors.

Active in his community, Alexander currently serves as a board member for Uniting for Life and as a member of the vocation awareness committee of the Cathedral of Mary Our Queen. He is past president of the St. Frances Xavier Church Parish Council and The Holy Name Society. In his spare time, Alexander enjoys gardening, raising aquarium and pond fish and traveling. He resides in Pikesville, Md., with his wife, Joslyn, and son, Jared.



All Alumni REUNION



7 Guy Alexander, DDS '82 8 Debra Irvin, DDS '83, enjoys the ice-cream social with her daughter, Karoline. 9 Jen-Fan Weng, DDS '93, and classmate Lisa Elder, DDS '93, watch as magician Bill Gross performs a magic trick.

PAUL DREHOFF



2013

Alumni RECEPTIONS



Chesapeake Dental Conference • Sept. 20, 2013, Ocean City, Md.

Clockwise beginning at left: ❶ Charles Bright, Ron Carter and Elaine Miginsky ❷ Alumni Bruce Yuille, Leonard Bers, Stephen Krizan and guest. ❸ Jennifer Matelis, Andrew Horng and Arehana Johnson ❹ Adam Schneider and Marc Nuger
Photos by Keith Groves



American Academy of Periodontology Annual Session • Sept. 30, 2013, Philadelphia

❺ Robert Weishoff, Erini Mela and Stavros Mastronikolas ❻ Interim Dean Mark Reynolds (second from left) with fellow alumni
Photos by Jessica Schmidt-Bonifant



ROBERT BROWN, DDS '58

Saving Teeth, Saving Lives



It's hard to know whether Robert Brown, DDS '58, at age 80, is more passionate about dentistry or lifeguarding. This much is true—the octogenarian has been actively pursuing both careers for longer than most people.

A native of Margate City, N.J., Dr. Brown grew up just minutes from the Atlantic City beaches. His father, Benjamin Brown, DDS, graduated from the University of Maryland School of Dentistry (UMSOD) in 1928 and established a general dentistry practice in Atlantic City. Prior to establishing his dental practice, the elder Brown was a lifeguard on the Atlantic City Beach Patrol (ACBP) from 1920 to 1927.

To say that Brown followed in his father's footsteps is an understatement. He graduated from UMSOD in 1958 as a general dentist and immediately joined his father's practice. He remained active in the practice until his retirement in October. While Brown has been a dentist for more than 55 years, he has been a lifeguard even longer. He joined the Atlantic City Beach Patrol in 1951 and still patrols the beaches 62 years later. He may, in fact, be one of the country's oldest and longest-serving lifeguards. While he doesn't sit at a lifeguard station anymore (he is now the assistant chief), he still dons a lifeguard uniform—red swim trunks, a white t-shirt with the beach patrol emblem and a whistle—six days a week during the summer season. He walks the beach, ensuring that swimmers are safe and that the lifeguards on duty are following regulations. He is also responsible for managing the payroll that includes 162 people, the youngest of whom is 16.

Why stay on the beach patrol for so long? "I love the beach and being near the ocean! The beachgoers and my coworkers are all like family. I enjoy bantering with the kids on the beach, and staying active keeps me moving and healthy," says Brown.

"As a young lifeguard, I would run and swim and row in the mornings to stay in shape," Brown continues. "We had to be fit. There were times when we would make 45 rescues in a single day." While beachgoers have benefitted from his watchful eye, they may also have benefitted from his career as a dentist—Brown authored an article on the hazards of chewing smokeless tobacco for the ACBP yearbook and has served as the dentist for countless numbers of beach patrol colleagues.

"Chief Brown is one of the most respected members of our patrol," says Captain Norman Draper, who has served with Brown on the ACBP for the last 50 years. "What he brings to the table is experience, and plenty of it. He still has good 'eyes'—the ability to watch the water and spot rescues." The ACBP made more than 1,500 water rescues this past summer.

Brown's volunteer work is closely aligned with his vocations. He is the secretary of the Atlantic City Beach Patrol Benevolent Organization and has served as the secretary of the Atlantic-Cape May County Dental Society since 1960. The New Jersey State Dental Association presented him with the Theodore Symanski Lifetime Achievement Award upon his 50th year of service.

What is the hardest part of being on the beach patrol? Brown says, "Leaving at the end of the day." 🌊



Upper Left: Lifeguard Robert Brown at Atlantic City Beach Patrol Headquarters in 1961. Right: Brown still patrols the beaches on foot, keeping a watchful eye on swimmers.



Class Notes.....

1957 Vito D. Buonomano received an honorary doctorate in public service from Providence College in Providence, R.I. Dr. Buonomano and his wife, Louise, were recognized for their contributions to the college's Concannon Fitness Center, endowment of a scholarship and support for St. Mary's Home for Children in North Providence.



J. Thomas Soliday

1963 J. Thomas Soliday, DDS, was named the 2013 Distinguished Alumnus of the Year.

1967 John Vandenberg, DDS, published a book entitled *From Tyranny to Freedom* which chronicles his family's survival in Rotterdam, Holland, during the Nazi invasion of the Netherlands during World War II.



Barry Setzer

1973 Barry Setzer, DDS, was honored with the 2013 Humanitarian Award from the Florida Dental Association's Florida Dental Health Foundation for 35

years of service to the Jacksonville Cleft Palate Clinic as their pediatric dentist.

1974 Patricia Mulford, RDH, received the 2013 Linda DeVore Dental Hygiene Alumnus Award.



Patricia Mulford

1975 Warren Brill, DMD, MS, has been named president of the American Academy of Pediatric Dentistry. ♦ **Richard Grubb, DDS,** has been named an honored fellow by the American Academy of Implant Dentistry.



Richard Grubb

1977 Nancy Keselyak, RDH, MS, associate professor and junior clinic coordinator at the University



Nancy Keselyak

of Missouri-Kansas City School of Dentistry, was named Educator of the Year by the American Dental Hygienists' Association.



Arthur Nimmo

1979 Arthur Nimmo, DDS, a professor in the Department of Restorative Dental Sciences at

the University of Florida College of Dentistry, has received a Senior Faculty Award. This university-level award recognizes faculty who have made significant achievements in teaching, scholarly activity and service.

1980 Robert Ettleman, DDS, was named the 2013 Community Hero of the Year by the Tampa Bay Lightning hockey team for his efforts founding Gulf Coast Dental Outreach, a non-profit organization that provides affordable dental care to low-income patients. 🌟

Send us your personal and professional news for *Mdental's* Class Notes:

dentaladvancement@umaryland.edu

University of Maryland School of Dentistry
Office of Institutional Advancement
650 W. Baltimore Street, Suite 6207
Baltimore, MD 21201
410.706.7146



In Memoriam

We are saddened by the loss of the following alumni and friends:

Fred B. Abbott, DDS '62
Joseph Applebaum, DDS '48
Durwood E. Bach, DDS '75
Richard P. Beimler, DDS '63
Joseph E. Belott, DDS '47
James J. Campbell Jr., DDS '69
Thomas D. Cox, DDS '74
Debra A. Dudley, DDS '77
Charles Epstein, DDS '44
Arthur C. Fridley, DDS
Ernest H. Hinrichs Jr., DDS '48
Gene C. Hose, DDS '56
Gerald M. Isbell Jr., DDS '57
Leroy R. Jackson Jr., DDS '77
Lawrence P. Jacobs, DDS '58
Drexel M. Johnston Jr., DDS '55
Douglas Kaplan, DDS '61
John P. Keffer Jr., DDS '57
Robert H. Killpack, DDS '58
Leonard Koenig, DDS '41
Stephen M. Kukucka, DDS '48
Ronald Lawrence, DDS '41
Arthur J. LePine, DDS '43
Melvin L. Lerner, DDS '71
Robert J. Leupold, DMD
Frank W. Mastrola, DDS '60
John C. Miller Jr., DDS '57
Vernon F. Ottenritter, DDS '52
Joseph M. Powell, DDS '58
Lawrence D. Rogers, DDS '59
Paul Rubinstein, DDS '63
James T. Rule Jr., DDS
Bernice K. Sachs
Masaichi Sagawa, DDS '50
Cheryl T. Samuels, RDH, PhD
Robert W. Seniff, DDS '54
Alan Stoler, DDS '57
Dean A. Swank, DDS '93
Robert I. Swan, DDS '51
John H. Swann, DDS '61
Margaret K. Thome
Fernando L. Iturrino Tossas, DDS '48
Joseph F. Williams, DDS '55

Debra Antoinette (Bass) Dudley, DDS '77 (1952–2013)

**First African-American
Woman to Graduate from
UMSOD**

Debra Antoinette (Bass) Dudley, the first African-American woman to graduate from the University of Maryland School of Dentistry (UMSOD), passed away on May 14, 2013.

Dudley was not one to let challenges stand in the way of her aspirations. As a student at Morgan State University, Dudley developed a keen interest in science. She enrolled at UMSOD in 1973 and found dental school to be particularly tough because she lacked a strong support group among her fellow students. Even in the 1970s, bigotry and bias were almost daily tests of Dudley's resolve. She drew inspiration from her father, a well-educated man who had considered attending dental school with his daughter, though he passed away before he could enroll. She also relied on the support of her husband, Robert, whom she married while attending dental school.

After graduating from UMSOD in 1977, she established a successful private practice in Baltimore. By the mid-1980s, Dudley desired new professional challenges. She sold her practice and moved to Miami, where she began a career in education. As an instructor, Dudley developed a dental laboratory for the medical magnet program at Miami Northwestern High School. The lab was set up like a dental operatory where students interested in dental careers could learn more about the profession.

Dudley became an assistant principal within the Miami-Dade County School District and later taught science as an adjunct professor at Florida Atlantic University. After retiring from teaching, Dudley continued to give back to the community. She played a vital role in designing the Yeager Plaza in Miami. The plaza, developed to serve an underprivileged population, provides office space for doctors, an educational center and a medical museum.





Associate Professor Mark Shirtliff conducts research on deadly bacteria.

Waging War on Deadly Bacteria

For millions of patients, a simple prescription of antibiotics is all it takes to wipe out a potentially lethal bacterial infection. But what would happen if those antibiotics were powerless to fight the infection? The scenario is a terrifying reality for patients who suffer from biofilm infections. These infections are caused when bacterial cells attach to a surface and act as a community that is tolerant to all antibiotics, compared to their free-floating counterparts. Defeating those resistant bacteria has become a focus for Associate Professor Mark Shirtliff, PhD.

Biofilm infections have been Mark Shirtliff's primary area of interest since he earned his PhD at the University of Texas in 2001. Shirtliff completed his research training under an orthopedic surgeon, where he witnessed the devastating effects that biofilm infections can have on surgery patients. After publishing his PhD thesis, "*Staphylococcus aureus*: Roles in Osteomyelitis," he intensified his research into the deadly bacteria that cause biofilm infections. He studied biofilms and biofilm-related diseases as a postdoctoral fellow and later as an assistant research professor at the Center for Biofilm Engineering at Montana State University.

Since joining the University of Maryland School of Dentistry (UMSOD) in 2003, Shirtliff has produced more than 90 peer-reviewed publications, given more than 80 national and international presentations and received more than \$3.7 million in funding from the National Institutes of Health, the Department of Defense and other organizations. He maintains a secondary appointment as an associate professor in the Department of Microbiology and Immunology at the University of Maryland School of Medicine. His lab at UMSOD studies biofilm infections to identify specific bacterial genes that could be used for effective prevention, diagnostics and treatment regimens.

Shirtliff Takes Top Honors

On Feb. 20, 2013, Shirtliff was honored by the Maryland Biotechnology Center with the 2013 BioMaryland LIFE (Leading Innovative Faculty Entrepreneurs) Prize for his research that led to the development of a vaccine for *Staphylococcus aureus* biofilm infections. Creating a staph vaccine has been a priority for Shirtliff for more than a decade, since he first began researching the antibiotic-resistant strain of these lethal bacteria. Methicillin-resistant *Staphylococcus aureus*, commonly known as MRSA, is a strain of bacteria that has developed resistance to common antibiotics like penicillin and cephalosporin. This resistance makes some MRSA infections very difficult to treat.

After presenting his research to officials from the Maryland Biotechnology Center (MBC), Shirtliff was selected as one of two 2013 BioMaryland LIFE Prize winners. The MBC, operating within the Maryland Department of Business and Economic Development, is charged with coordinating government, nonprofit and private sector initiatives to help entrepreneurs,



FACULTY UPDATE

CoverStory

academic and government scientists convert biotechnology innovation into products. The organization has presented the LIFE Award annually since 2010.

The BioMaryland LIFE Prize, which includes a \$50,000 award, recognizes researchers whose biotechnology advances have the greatest potential for commercial applications. The MBC chose to honor Shirliff, in part, because of the prevalence and severity of MRSA infections, which makes vaccination a top priority for health care professionals around the globe. Shirliff estimates that there is an \$8 billion world market for an anti-*Staphylococcal* vaccine. The award money will enable Shirliff to continue developing antigens that can be used to test the effectiveness of his vaccine in the lab. "I felt incredibly honored and very thankful to win the award. I owe a lot of this success to the researchers in my lab and to Dr. Patrik Bavoil for supporting my work," states Shirliff.

"Mark epitomizes the spirit of a true researcher and entrepreneur. He is always looking for ways to make his work translationally useful to the public. If successful, Mark will have achieved something that many of us can only dream of: linking fundamental research in microbial pathogenesis to a product that is beneficial to the tax payer, i.e. the people who pay taxes to fund his research," states Patrik Bavoil, PhD, chair of the Department of Microbial Pathogenesis.

What Is a Biofilm?

A biofilm is a group of bacteria that are "stuck in slime," explains Shirliff. Biofilms begin to form when bacteria enter the bloodstream. As they travel through the bloodstream, the bacteria begin producing receptor-like proteins called adhesins which allow them to adhere to human bone or tissue.

After adhering to the human bone or tissue inside our bodies, the bacteria rapidly divide. Once the bacterial population has reached a certain limit, or quorum, they stop producing adhesins and increase their production of toxins, which attack the host. Some *Staphylococcal* strains that produce severe biofilm infections can generate as many as 30 different toxins.

Once the body detects the biofilm, the immune system attempts to attack the bacteria. However, the bacterial toxins break down the body's white blood cells; these destroyed cells form a protective wall around the infection. Even after they have been

walled off by the body's immune system, the bacteria can detach and spread the infection to other parts of the body.

Once these bacteria become stuck in a slimy biofilm, antibiotics are no longer able to kill them. Antibiotics target bacteria that are active and dividing throughout the body, so these slow-growing

The research Shirliff conducted could also be used to prevent the formation of biofilms in patients who are at-risk for bacterial infections.

bacteria can effectively tolerate the antibiotics. And while slime may not sound too menacing, infections due to biofilms kill more than half a million people in the U.S. every year. In fact, according to the Centers for Disease Control, 65 percent of all infections are biofilm related.

The layer of gunk that coats a person's teeth first thing in the morning is an example of a biofilm. As long as there is a toothbrush nearby and one can physically brush off the bacteria, that biofilm doesn't pose much of a threat. "A biofilm is easy to get rid of if it is in your mouth. It's more difficult when it is somewhere else in the body where you can't easily remove it," Shirliff explains.

Biofilm infections can be at their worst when the bacteria are stuck to a foreign object inside the body, like a pacemaker, artificial joint or a metal pin in a broken bone. In the vast majority of cases, the only way to treat the biofilm infection is to surgically remove it, which is a dangerous and costly process. Treatment of biofilm infections in the U.S. costs about \$10.7 billion a year.



Postdoctoral Fellow Jen Harro examines bacteria growing on an agar plate.

Oftentimes, the treatment is not effective, resulting in more than 50,000 deaths annually. MRSA biofilm infections are particularly deadly; the disease kills more people each year than the combination of tetanus, pneumococcus, *Haemophilus influenza* type b, pertussis and diphtheria during the pre-vaccine era. “We’ve tried to use antibiotics to fight these infections, but this approach isn’t working. Compounding the problem is the fact that many of the vaccines currently produced target the types of diseases that are relatively straight forward and have only one or a few bacterial factors that contribute toward disease,” states Shirliff.

Vaccine Development is Key

Shirliff is convinced that developing an effective vaccine is the best defense against biofilm infections. He and his lab members began the process by isolating five different antigens produced by bacteria in *Staphylococcus aureus* biofilms. Antigens are toxins that induce the body to begin producing disease-fighting antibodies. Shirliff combined the antigens to create a vaccine and tested it against a *Staphylococcus* bacterial infection. When all five antigens were used in the vaccine, every single test subject overcame the infection.

Shirliff was pleased with the results, but he decided to repeat the experiment and evaluate the vaccine’s effectiveness against an even greater infection. In the next experiment, he tested the vaccine against an infection consisting of an inoculation of 300 million staph bacteria. The vaccine completely eliminated all of the bacteria from the body. That success has caught the attention of a major pharmaceutical company, which is currently preparing to test his patented vaccine.

Future Applications

Shirliff continues to study additional applications of




The Shirliff lab: (from left) Jen Harro, Jeff Freiberg, Mark Shirliff, Devon Allison, Yvonne Achmermann, Misun Kang and Haesoon Lim

his model, including how it could be used to create vaccines for other diseases that often lead to biofilm infections, like cystic fibrosis, endocarditis and chronic urinary tract infections.

He also plans to utilize his research to improve diagnosis of biofilm infections. Once a biofilm forms in the body, it is difficult for practitioners to isolate and culture bacteria. The bacteria are stuck in the biofilm, and may be in a location that is difficult to biopsy. Without a sample of the bacteria, doctors struggle to effectively determine the specific type of bacterial infection. However, using Shirliff’s research as a base, a practitioner could test a patient to determine the type of biofilm infection that is present. The doctor could draw the patient’s blood to see if the patient has developed antibodies against a specific biofilm protein. Those antibodies could help the practitioner successfully diagnose the infection using a quick test for *Staphylococcus aureus*. This test is currently being developed by a Maryland company, Bioassay Works, Inc. In September, Shirliff and his fellow researchers were awarded a U.S. patent for an invention that provides methods for biofilm detection.

The research Shirliff conducted could also be used to prevent the formation of biofilms in patients who are at-risk for bacterial infections. For example, a patient who receives a metal pin in the bone or a patient suffering from a compound fracture typically has a 20 to 30 percent chance of developing an infection, Shirliff explains. However, if those patients received injections of anti-biofilm antibodies before their treatments, it could prevent the infections from forming.

Ultimately, Shirliff is hopeful that his research will help create an anti-staph vaccine that could improve patient care around the world. “Biofilm infections kill hundreds of thousands of people. If I can make an impact and try to eliminate some of the suffering that I’ve seen, I will have succeeded,” he concludes. 





Huakun Xu

Professor Huakun Xu, PhD, MS, and his collaborators have been honored with the 2013 William J. Gies Award for Biomaterials and Bioengineering Research from the International Association of Dental Research (IADR). The award recognizes the pioneering research of Dr. Xu's group in the development of a tooth-filling material that strengthens teeth and kills cavity-producing bacteria.

"I feel honored and humbled to receive this award because this has been a group effort. This has all been made possible by the researchers in my lab, the University of Maryland School of Dentistry's (UMSOD) administration and the funding sponsors," says Xu, director of biomaterials and tissue engineering in the Department of Endodontics, Prosthodontics and Operative Dentistry.

The tooth-filling material that strengthens teeth and kills cavity-producing bacteria was developed by Xu and his group: Lei Cheng, DDS, PhD, postdoctoral scientist; Ke Zhang, DDS, visiting PhD student; Mary Anne Melo, DDS, PhD, MSc, assistant professor; Michael Weir, PhD, MS, research assistant professor; and Xuedong Zhou, PhD, DDS, MS.

Xu spent the past decade of his scientific career

“A typical dentist spends 50 to 70 percent of his or her time digging out old and failed restorations and placing new ones. I thought that remineralizing and anti-bacterial filling materials could be useful in reducing the failure rates of restorations.”

researching the use of biomaterials as a means to replace lost minerals and regenerate bone. After starting his lab at UMSOD in 2007, he decided to expand his calcium phosphate mineral work into the realm of tooth-filling materials.

“A typical dentist spends 50 to 70 percent of his

Captures IADR Award

for Innovative Filling Material

or her time digging out old and failed restorations and placing new ones. I thought that remineralizing and antibacterial filling materials could be useful in reducing the failure rates of restorations,” says Xu.

When a dentist fills a tooth, the prepared tooth cavity usually contains some bacteria or carious tissues. In addition, there are often microgaps at the restoration/tooth interfaces. The small gaps can trap bacteria, which can secrete acids and further weaken the tooth structure, leading to the development of secondary caries. The secondary caries, located along the perimeter of the original restoration, are the main cause of restoration failure, Xu explains.

His research has implications that stretch far beyond laboratory walls. By increasing the longevity of restorations, health care costs to society could decrease. It also would improve the quality of life for millions of patients, says Xu. The filling material could be especially beneficial for underserved populations in the U.S. and in Third World countries that lack access to dental care. “Hopefully, our research will yield a better product and a better treatment method for patients, improve the efficacy of treatment and, ultimately, improve their quality of life,” Xu says.



Dwayne Arola, PhD

COLLABORATION PUTS NEW MATERIALS TO THE TEST

Through collaboration with the University of Maryland, Baltimore County (UMBC), Xu tests the effectiveness of his discoveries. For the past five years, Xu has been working closely with Dwayne Arola, PhD, a professor with joint appointments in the Department of Mechanical

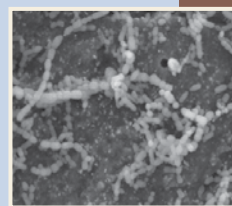
Engineering at UMBC and the Department of Endodontics, Prosthodontics and Operative Dentistry at UMSOD, to develop specialized testing devices for the innovative filling materials.

Arola, who studies how fatigue affects the durability of engineered materials and biomaterials, has developed a machine to simulate the oral conditions involving simultaneous cyclic loading and biofilm attack. The testing device is designed to apply the same cyclic stress that occurs during chewing. The device is unique because it is small enough to be placed inside an incubator, which provides the ideal conditions to grow bacteria that are commonly found in the oral cavity.

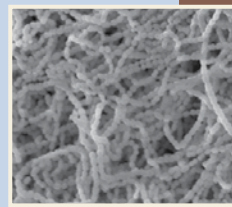
When testing the filling materials, Xu places a restoration inside the testing device utilizing the same method a dentist uses. He and his colleagues gather data to understand how the stress of chewing and the growth of bacteria simultaneously impact the strength of the filling material.

“The field of dentistry has never evaluated restoration materials under those two challenges—bacterial growth and cyclic stress. We are building new tools that will be able to evaluate the next generation of dental materials,” Arola said.

Another key research collaborator is Ashraf Fouad, BDS, DDS, MS, chair of the Department of Endodontics, Prosthodontics and Operative Dentistry at UMSOD. Xu and Fouad have just completed a study which showed that the restoration they developed caused an increase in dentin formation and had similarly mild cytotoxicity, compared to commercial restorations. Xu hopes that their multidisciplinary collaboration will further improve the properties and performance of the restoration materials and bring the new technology closer to clinical applications. 🦷



Bacteria grows on resistant resin.



Bacteria grows on traditional resin.

Mark Macek, DDS, DrPH

Studies Oral Health Literacy

Q. How did you get interested in research?

A. I was a chemistry major in college. While I was a student, I worked in an inorganic chemistry lab and really enjoyed the process of discovery. During my residency, I enjoyed interacting with my patients but wanted to address broader issues relating to the health care system and the needs of underserved populations. After my residency, I had the opportunity to complete a research fellowship with the Veterans Administration where I studied the bacteria that cause periodontal disease. Still, what really encouraged me to become the researcher I am today was an opportunity to pursue a master's degree in public health. From the very first class that I took, I absolutely fell in love with the field. I knew it was what I wanted to pursue for the rest of my life.

Q. What is your current research focus?

A. Right now, I'm most involved with the field of health literacy. Health literacy is defined as the degree to which individuals have the ability to obtain, process and understand basic health information and make decisions. A person's health literacy can be thought of as a kind of "currency." In general, those who have higher levels of health literacy have more resources available to them within the health care system. In the United States, these resources are becoming more important, especially as the health care system becomes increasingly demanding and health care decisions become increasingly complicated.

Q. What research are you currently conducting?

A. Since 2011, my research team has been looking at the relationships between health literacy and oral health. I am the principal investigator (PI) for a \$2.7 million project sponsored by the National Institute of Dental and Craniofacial Research (NIDCR). Drs. Leonard Cohen and Haiyan Chen, and Susan



TITLE: Associate Professor of Dental Public Health

JOINED SCHOOL OF DENTISTRY: 1998

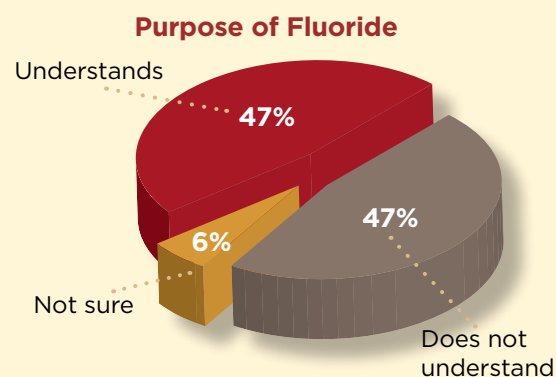
CURRENT RESIDENCE: Laurel, Md.

HOMETOWN: Chicago

FAMILY: Wife, Kerry

HOBBIES: photography, reading, music and camping

Oral Health Literacy



..... One of the simplest things we can do is pay careful attention to the reading level of some of the materials that we distribute to patients and the public. The average American can read at a sixth- to seventh-grade reading level. Yet most of the medical forms that we put in front of them are written at a college level. If we can simplify some of the forms and make them clearer, that could make a tremendous difference.

Coller, members of our Dental Public Health group, are also involved, as is MaryAnn Schneiderman from the Division of Dental Hygiene. My co-PI is Dr. Kathryn Atchison from the UCLA School of Dentistry. Together, we are leading a notable team of researchers from the University of Maryland School of Public Health, University of Baltimore Schaefer Center for Public Policy, Emory University School of Medicine and the Primary Care Coalition of Montgomery County. Dental students Sayo Adunola and Marla Yee have also worked with us.

The purpose of the project is to determine the extent to which having limited health literacy influences oral health decision-making and health status. Specifically, we're studying what patients know about dental care and the costs of dental treatment, whether they have visited an emergency room or physician for dental treatment, what their attitudes are about health care, etc.

Q. How will this research improve patient care?

A. One way to improve the situation would be to create easily understood messages for patients. In dentistry, it would also be important to get useful,

clear information to populations that might not see a dentist on a regular basis.

One of the simplest things we can do is pay careful attention to the reading level of some of the materials that we distribute to patients and the public. The average American can read at a sixth- to seventh-grade reading level. Yet most of the medical forms that we put in front of them are written at a college level. If we can simplify some of the forms and make them clearer, that could make a tremendous difference.

Someday, instead of handing individuals a brochure, it would be great if health care providers could use videos to educate their patients. That way, when patients are sitting in the waiting room, they can pull up a video that describes a root canal with visuals and with someone explaining it to them in simple terms, rather than having to read the information on their own.

Q. What are some of the biggest challenges to your research?

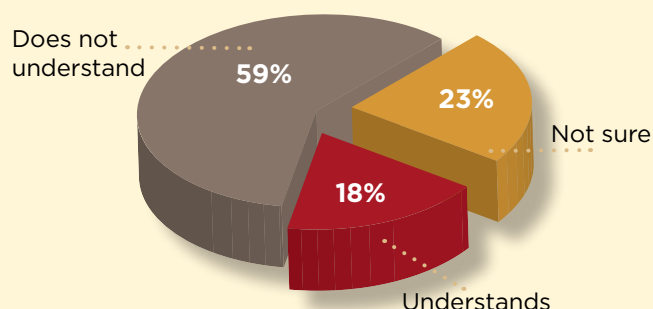
A. From national studies, we know that people with the lowest levels of health literacy are the individuals with the lowest levels of education and income. In general, in any kind of research, these groups are the hardest individuals to recruit for a study. Unfortunately, the folks who can tell us the most about how and why people have difficulty navigating the health care system are the same folks who are hard to recruit.

Q. What is rewarding about your work?

A. What is rewarding to me is the potential to help individuals understand, maybe for the first time in their lives, some basic information about taking care of their oral health. I could do that one-on-one with a patient in a chair. But to think that some of these solutions could be implemented at a city, state or even a national level is very exciting. 🐾

Among Poor Adults

Purpose of Dental Sealants



Volunteer Faculty

Share Wealth of **EXPERIENCE**

THE UNIVERSITY OF MARYLAND SCHOOL OF DENTISTRY'S (UMSOD) DEAN'S FACULTY PROGRAM actively recruits volunteers to assist with the school's research, service and teaching activities. Members of this essential program include alumni, community practitioners and recently retired dental professionals. Volunteer faculty foster the sharing of knowledge and practical experience with aspiring dentists and dental hygienists.

Last year, volunteer faculty members donated more than 20,000 hours to the program. The cost savings realized from the Dean's Faculty program is a significant added value to the school. The number of hours contributed is equivalent to \$1.5 million in faculty salaries.

In addition to the satisfaction that comes from training future dentists, program participants benefit from in-service training, continuing education credits, email accounts and free parking.



Chris Liang supervises a dental exam in the postdoctoral clinic.

Chris Liang, DDS '98

Dr. Chris Liang, an orthodontic specialist, graduated from UMSOD in 1998 and earned his certification in orthodontics from Boston University. He is in practice with his father, Donald, who is also an orthodontist, with offices in Potomac and College Park, Md. and in northwest Washington, D.C.

Liang joined the Dean's Faculty in 2004 and volunteers in the post graduate orthodontics clinic; he works with orthodontic residents on comprehensive treatment plans. "The Dean's Faculty is a good opportunity to help students with their training and see old friends," says Liang. "Dean's Faculty members offer students a different perspective. They are professionals who are often in private practice and can translate theory into practice; they've figured stuff out."

Liang is a member of the American Dental Association, American Association of Orthodontists, Maryland State Dental Association, Maryland State Society of Orthodontists, Southern Maryland Dental Society, District of Columbia Dental Society and the Mid-Atlantic Society of Orthodontists. He is the immediate past president of the Southern Maryland Dental Society and formerly served on the American Dental Association's Committee on the New Dentist.

In addition to his volunteer work with the Dean's Faculty, Liang gives back to the community by volunteering with Catholic Charities and Operation Smile. He also organizes volunteers for the Mid-Maryland Mission of Mercy, which is an event held annually in early August where dentists and hygienists volunteer to provide free care for low-income patients.

In his spare time, Liang enjoys fishing, golfing and biking. 🐟

In **2012** volunteer faculty members donated more than **20,000** hours to the program.



A first-year student observes Stanley Block as he demonstrates a technique.

Stanley Block, DDS '58

Dr. Stanley Block graduated from the University of Maryland School of Dentistry in 1958 and served in the Air Force after graduation, attaining the rank of captain before he founded his general dentistry practice in Annapolis in 1961. Dr. Block continued to practice in Annapolis until his retirement in 2005. His daughter, Joanne, who graduated from UMSOD in 1987, joined his practice and worked with her father until he retired. She then opened her own practice in Baltimore, where she now lives.

Block first became involved in organized dentistry as a founding member of the Anne Arundel County Dental Society in 1961. In 1975, he was appointed by the governor to the Maryland State Board of Dental Examiners. He would serve as board president twice, from 1979 to 1980 and from 1985 to 1986. Block has also served as an examiner for the Northeast Regional Board of Dental Examiners since 1975, and continues to serve on the board. He has helped shape the dental profession in Maryland as past president of the Maryland State Dental Association and the Anne Arundel

County Dental Society. Block was elected alumni association president in 1994 and serves on the school's board of visitors. He was one of the founders of the Dr. Samuel D. Harris National Museum of Dentistry and also served on the museum board. He is a life member of the American Dental Association and the Maryland State Dental Association.

Block has consistently remained a generous supporter of the school. This past year, he was presented with the Dean's Achievement Award for his outstanding service as a Dean's Faculty member. "The best part of working with the students is seeing their enthusiasm for knowledge. They are smart, committed and a pleasure to work with," Block comments. He joined the Dean's Faculty in 2004 and works with first-year students in the areas of dental anatomy and operative dentistry.

Block enjoys spending time with his family, golfing and collecting dental figurines in his spare time.

To learn more about the Dean's Faculty program, please contact Debbie Horstman at 410-706-7146 or dhorstman@umaryland.edu. 🐾



Cynthia Idzik-Starr presents a Boxer to the judge during the Northeastern Maryland Kennel Club Show.



STORY | PHOTOS
BY ADAM ZEWE

OVER THE PAST TWO DECADES, IDZIK-STARR HAS BRED, TRAINED AND SHOWN 26 CHAMPION BOXERS.

CYNTHIA IDZIK-STARR, DDS '84 Shows Champion Boxers

Cynthia Idzik-Starr, DDS '84, squints in concentration as she carefully brushes on a layer of soft, white powder. She dabs the powder delicately, careful to avoid the cold, black nose of the dog she is preening. Dr. Idzik-Starr is preparing one of her prized Boxers to enter the ring during the Northeastern Maryland Kennel Club Dog Show.

An animal-lover all her life, Idzik-Starr began showing Boxers when she was 16 years old. While she was studying veterinary science at Penn State University, she deepened her love for the friendly, energetic breed. After graduating from the University of Maryland School of Dentistry (UMSOD), Idzik-Starr immediately began saving money so she could buy her first pair of Boxers. Currently, she serves as assistant professor and director of urgent care in the Department of Oral and Maxillofacial Surgery at UMSOD.

Over the past two decades, Idzik-Starr has bred, trained and shown 26 champion Boxers. Currently, she keeps four Boxers at her home. And like any trainer, Idzik-Starr feels a deep sense of pride in their accomplishments. Three of her current Boxers have achieved champion status at dog shows. Training Boxers to be dog show champions takes time, effort and patience, she says. Every morning, Idzik-Starr gets up early and bikes one mile with each of her four dogs. In the winter, she runs the dogs on a treadmill to keep them in shape. She uses jumps, tunnels and agility devices to keep her dogs' minds

and reflexes sharp. "I like to make training more natural for them instead of making it seem like work. They don't care what color ribbon they get, so you have to make it fun for them," remarks Idzik-Starr.

During dog show season, which runs from March to November, Idzik-Starr is on the road with her dogs two to three weekends a month. Instead of packing her Boxers in crates for the long drives, she travels with a motor-home and lets the dogs run free while she navigates the highways. To prepare a dog for a show, Idzik-Starr trims its nails and whiskers and excess hair and then washes it down. "I'm lucky I have shorthair breeds because they dry almost instantly. I call them wash and go dogs," she remarks.

Idzik-Starr shows her dogs for conformation, which means the judges are examining the bone structure. As she jogs each dog around the ring, the judges study the animal's gait and symmetry. In the ring, Idzik-Starr is up against some tough competitors. Most breeders hire expert handlers to show their dogs. As a one-person operation, Idzik-Starr goes head-to-head against the professionals. "It's a challenge for me. It feeds my competitive edge. I feel like, when I get a champion, they really earned it," she states.

While it can be challenging and exhausting to show Boxers, Idzik-Starr enjoys the variety of people she meets and dogs that she encounters at the shows. Even after returning home from a grueling weekend on the road, she couldn't imagine life without her canine companions. 🐾

Faculty Promotions

Patricia Meehan, DDS '93

has been appointed associate dean of academic affairs. After earning her DDS from UMSOD in 1993, she received her certificate in periodontics in 1995. Meehan practiced in Washington, D.C. until she assumed a full-time position with the Department of Periodontics in 1997. From 1997 until 2004, she taught full-time in the Department of Periodontics where she directed the year-two periodontics course. Meehan also served as a GP periodontics supervisor, an attending dentist with University Hospital's general practice residency and as co-director of UMSOD's ethics course. In 2004, she assumed the role of director of admissions and recruitment and most recently served as the assistant dean for admissions and recruitment.



Louis DePaola, DDS '75

has been appointed assistant dean of clinical affairs. In this new leadership position, DePaola will oversee all clinical activities at the School of Dentistry. DePaola most recently served UMSOD as chief of clinical operations. A prolific scientist, DePaola has authored or co-authored more than 130 journal articles, book chapters and abstracts. He also serves as director of dental training for the PA-Mid-Atlantic AIDS Education and Training Center. Over the past 20 years, DePaola has been awarded more than 75 research and service grants. Many of the grants have pertained to areas such as antiplaque chemotherapeutic agents, HIV/AIDS, management of medically compromised dental patients, rapid salivary diagnostic testing, dental unit waterlines and infection control.



Marion Manski, RDH, MS

has been named director of the Dental Hygiene Program. Ms. Manski had been serving as the interim program director and the director of admissions and recruitment. After receiving her certificate and associate's degrees in 1983 from the Forsyth School for Dental Hygiene at Northeastern University in Boston, she earned her bachelor's degree in dental hygiene at UMSOD in 1988. She joined the faculty in 2002. In 2004, Manski earned a master's degree from the University of Maryland Graduate School. She teaches didactic and clinical courses and coordinates the local anesthesia curriculum for hygiene students. Her research interests include periodontitis, early childhood caries, nutrition, caries prevention and local anesthesia. 🍷



Contributions by Adam Zewe and Paul Drehoff



Elaine Romberg, PhD Recognized for 35 Years of Service

As Professor Elaine Romberg, PhD, retires from full-time teaching, she is proud to continue a rewarding career that has spanned 35 years.

After earning a PhD in statistics, measurement and evaluation, Romberg was invited to come to the University of Maryland, Baltimore (UMB) and initiate a course in beginning statistics for DDS students and a graduate-level course in statistics for residents. Her teaching also has benefited students from UMB's sister schools, members of professional associations, and faculty and students at numerous universities in the U.S., Canada, Europe and China.

Why are statistics so important? "Knowledge of statistics and research design are important subjects for dental students to master because much of their continuing education in dentistry will come through reading professional journals," says Romberg, who has supported the development of student and faculty research projects in dentistry and the basic sciences throughout her career. "If the practitioner is not able to evaluate the quality of what they read, they will not properly keep up with the advances in their field."

Ashraf Fouad, BDS, DDS, MS, chair of the Department of Endodontics, Prosthodontics and Operative Dentistry, says, "Dr. Romberg has mentored countless students and faculty on research design and analyses, an important component of which is formulating a hypothesis and writing aims to test it. This method of thinking is fundamental to contemporary health care practice."

Romberg joined the School of Dentistry faculty in 1978 and, in 1992, was promoted to full professor, just the third woman so honored since the School's found-

ing in 1840. She counts this as her proudest achievement in a career full of them.

She developed and managed the school's Outcomes Assessment Program from 1978 to 2003. Her successful research centering on educational evaluation and dental science has resulted in more than 100 publications and 30 grants totaling more than \$19.5 million. Her curriculum vitae lists 28 first-author invited presentations, 47 first-author paper presentations, 61 co-authored paper presentations and administration of 39 programs at national and international meetings.

Romberg has been actively involved in the Women's Forum, a group of female faculty members at the school who meet as needed to advocate for women's issues. The forum began in the mid-1990s to address the inequity in pay between male and female faculty members.

The University granted Romberg the status of professor emeritus in recognition of her outstanding contributions. She also served as an honorary faculty marshal at UMB's commencement ceremonies this past May. "It gives me great pleasure to celebrate the hard work and achievements of our students!" states Romberg.

She retired in December, but enjoys working with students and faculty members so much that she volunteered her time as a member of the Dean's Faculty. In July, she returned as a part-time faculty member.

Romberg offers, "The mental stimulation that comes from close relationships with students and faculty as they conduct their research and develop the reports of their studies, that's what I enjoy the most."

"The prosthodontic residents earned multiple research awards as a result of Dr. Romberg's efforts. She is a superb statistician, an excellent teacher and a great friend to all of us here at the school," remarks Carl Driscoll, DMD, program director for the Advanced Education Program in Prosthodontics.

Now that she is working part-time, Romberg is excited for the opportunity to travel. She also plans to spend more time enjoying her son, daughter and grandson. 🌸

Norman Capra, PhD, MS Retires after 23 Years of Service

Norman Capra, PhD, MS, served as an honorary student marshal at the University of Maryland, Baltimore's commencement ceremonies this past May—an honor, he says, “at this stage of my career was incredibly special. Honestly, it felt a bit like a personal graduation; an event marking new beginnings and a reminder that learning is truly a lifetime adventure.”

Those graduates who earned combined DDS/PhD degrees from the School of Dentistry and those who have benefited from the School of Dentistry's collaboration with the Graduate Program in Life Sciences (GPILS) owe a debt of gratitude to Capra, who as director of graduate studies from 1996 to 2006 helped move the initiatives forward.

“My proudest accomplishments at the University of Maryland were in the area of graduate education,” says Capra, a professor in the Department of Neural and Pain Sciences who joined the School of Dentistry faculty in 1990.

“Norm Capra is a dedicated educator, a well-respected scientist and a terrific person,” says Joel Greenspan, PhD, chair of the Department of Neural and Pain Sciences. “He contributed greatly to the success of our School of Dentistry and the University's Program in Neuroscience. He also made significant contributions to science with his research, publications, review work and the training of future generations of dentists and scientists.”

In addition to being a faculty leader, Capra has amassed a sterling career as a researcher. His laboratory was the first to correctly identify the location and central connections of sensory neurons that supply the temporomandibular joint (TMJ). For more than 20 years, he has studied orofacial pain. He also held an adjunct appointment in the School of Medicine's Department of Anatomy and Neurobiology.

Capra is responsible for 41 publications, 13 book chapters, 75 abstracts and research and training grants



“THROUGHOUT MY CAREER, I LEARNED THAT SOME OF MY BEST TEACHERS WERE MY STUDENTS.”

totaling approximately \$4 million. He has served as a reviewer for more than 20 peer-reviewed journals, was a regular member of two National Institutes

of Health study sections and served on the editorial boards of the *Archives of Oral Biology*, *Dysphagia* and the *Journal of Dental Research*.

Add this to the nearly two dozen courses Capra has taught at the School of Dentistry, including directing the dental human anatomy course for five years, and it results in an impressive body of work.

But ask him about his accomplishments and he quickly steers the conversation back to the students. “I consider the roles of researcher and professor/educator to be equally important,” Capra says. “However, mentoring was a particular passion of mine. To help a student reach his or her potential, and feel you had a part in that growth, is a truly wonderful experience.”

Capra, who retired at the end of June, was granted the status of professor emeritus. He is working on a book chapter for a research monograph with Jin Ro, PhD, MA, and Radi Masri, DDS, MS, PhD. He is also working on a dental version of an interactive dissection manual with School of Medicine Associate Professor Adam Puche, PhD. What is the best part of retirement? “It still feels like I'm on vacation,” says Capra, who, along with his wife Mary Jo, enjoys organic gardening, bird watching and yoga. 🧘



Carol Anderson, DDS '88, MS



Assistant Professor Carol Anderson, DDS '88, MS, retired in June after serving the University of Maryland School of Dentistry (UMSOD) for 19 years. In 1994, Anderson began her career at UMSOD as a general practice manager in the predoctoral clinic. She enjoyed the challenges

of overseeing 25 dental students as they provided patient care.

Anderson was appointed director of the University of Maryland School of Dentistry College Park Dental Clinic in 2006. Over the next seven years, she led the clinic as it expanded from two operatories, which were open three days a week, to six operatories, which are now open five days a week. In fiscal year 2013, the clinic served more than 700 patients, which is an 8 percent increase over the previous year. Anderson is proud that the clinic has grown because it fills a vital role as a provider of dental care to underserved patients in the surrounding community.

During rotations in the clinic, dental and hygiene students and residents gain experience treating patient populations that are different from the ones they serve at the school in Baltimore. Thirty-six dental students, 30 hygiene students and 10 residents provided care at the clinic last year. "While there were many challenges in starting this clinic, I found that it was very rewarding to see how the students grew professionally as they rotated through it," Anderson states.

"I enjoyed working with Carol. She was instrumental in starting and developing the College Park dental clinic. We will miss her," remarks Doug Barnes, DDS '83, MS, chair of the Department of General Dentistry.

Anderson knows that, in retirement, she will cherish the friendships she made during her 19 years of service at UMSOD. "I learned an incredible amount about dentistry, about doctor-patient relationships and about faculty-student interactions, but most of all, I learned a great deal about myself," she concludes. 🌸

Deborah Wojcik



When Deborah Wojcik began working at the University of Maryland School of Dentistry (UMSOD) in 1979, she never imagined that she would retire from the institution after a 34-year career.

She began her tenure at UMSOD as a secretary in the Department of Physiology. Two years later, Wojcik accepted a position as an administrative aid in the Department of Restorative Dentistry, supporting Department Chair George Buchness, DDS '61. During the next nine years of her career, she built a strong relationship with Dr. Buchness and enjoyed working closely with faculty, staff and dental students. "Our department really became a close family during those years," Wojcik states.

After serving as an administrative assistant in the Dean's Office from 1990 until 1999, working closely with Senior Associate Dean Warren Morganstein, DDS '69, Wojcik became executive administrative assistant in the Department of Oral and Maxillofacial Surgery. In addition to her administrative duties, Wojcik served as a reassuring voice for undergraduate dental students as well as residents who struggled to adapt to the challenging coursework and crowded schedules. "I always tried to be as positive as I could with the residents. After a little while, they figured out how to succeed in the program and the work became easier for them," she says.

"Deborah Wojcik has been an instrumental member of our team for the past 14 years and has made invaluable contributions to the school and to our department. I am grateful for her dedication and exemplary service. We will all miss her and we wish her well in retirement," says Robert Ord, DDS, MD, chair of the Department of Oral and Maxillofacial Surgery.

Wojcik retired in June but knows that she will continue to enjoy the many lifelong friendships she developed during a rewarding career at the school. She is looking forward to having more time to travel with her husband, Thomas, and enjoy her two children and five grandchildren. 🌸



UNIVERSITY OF MARYLAND

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SCHOOL OF DENTISTRY

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Vision: As we strive to achieve our goals, we envision the future. Reflecting on its heritage, the University of Maryland School of Dentistry will join in full partnership with other campus entities. The resulting multidisciplinary ventures will contribute to our prominence in scientific discovery, scholarly activity and service to the community. Global outreach efforts of faculty, students and staff will be mutually rewarding. An atmosphere of collegiality and intellectual stimulation will prevail, nurturing students, faculty and alumni.

Administrative support will help foster creativity and responsiveness to a range of opportunities. The school will create and maintain an organizational structure that enhances our ability to achieve our goals. Students, faculty and staff will provide the highest quality of oral health care. The world's first dental college, established in the 19th century, will take its place as the premier dental school of the 21st century.

Core Values:

Accountability
Civility
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Diversity
Excellence
Knowledge
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The University of Maryland, Baltimore is the founding campus of the University System of Maryland and home to schools of dentistry, law, medicine, nursing, pharmacy, social work and a graduate school. Under the leadership of President Jay A. Perman, MD, the University educates more than 6,000 students and conducts nearly \$500 million in sponsored research annually.



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