

Mdental

SPRING/SUMMER 2009

UNIVERSITY OF MARYLAND | BALTIMORE COLLEGE OF DENTAL SURGERY
The Alumni and Research Magazine of the World's First Dental School

A close-up portrait of an elderly man with white hair and a mustache, wearing a dark sweater with a green and white diamond pattern over a striped shirt. He is looking slightly to the right of the camera with a gentle smile. The background is a blurred, patterned chair.

Savoring the Past, Shaping the Future

Alumni like Saul Rosen, 101, have built the foundation. Now today's students and faculty are taking the School to new heights.

A Shift in the Right Direction

NO ONE WANTS TO HAVE THEIR CAR stuck in gear. It's a headache—and sometimes it can be costly. Being able to shift gears is, of course, a necessity.

Although many people look at our School and comment, quite accurately, that we offer a high-caliber education, provide excellent patient care, and engage in challenging research investigations, there is much more than meets the eye. Sometimes an institution needs to be a bit clairvoyant to see what lies ahead and act accordingly. That often means switching gears before we get stuck in a cycle that can't be easily undone.

The changes that we are making will enrich our institution and create a variety of interfaces to allow us to constantly move forward. One of the most recognizable changes, which you will read about in this issue of *Mdental*, is the reorganization of our core research departments to reflect the three most critical areas: neuroscience and pain, microbiology, and cancer. The department chairs in these areas address how that change has strengthened their faculty to become better aligned internally and even more engaged for external collaborations. We also have included brief profiles of five researchers who represent the research of today and tomorrow.

In alumni and development news, we welcomed a new chief development officer, who articulates a message on page 30 that shows a re-energized focus and vision for building and sustaining inspired relationships. Our alumni are the backbone of this School, and we know that we can never move forward without their support and advice. I had the



pleasure of visiting with several alumni in Florida last summer, a few of whom are featured in this issue. Basic engineering principles tell us that every gear must operate from a stable foundation, and our alumni represent that foundation.

Of course, as we look to the future, our students will leave us with more than just the knowledge required to become dental professionals. They will leave our School prepared to improve the profession, they will want to do more, and they will be equipped to exceed their predecessors. Our student profile highlights someone who is actively engaged and committed, both academically and within the community.

I am fortunate to have staff, faculty, students, and alumni who help make these transitions seamless and vision oriented. Input from all of these stakeholders will always be the key to our continued success.

We've put the gear in drive and we're moving on.

A handwritten signature in black ink, which appears to read "Stohler". The signature is fluid and cursive.

Christian S. Stohler, DMD, DrMedDent
Dean

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table of contents

FEATURES



04
Just a Little Bit
of Heart



08
Three Friends,
Five Decades,
One Dental
School



20
Broad
Expressions

- 13 Filling the Biggest Shoes
- 14 Enwonwu Leads First World Noma Conference
- 16 Reorganized and Refocused
- 26 Breaking Barriers and Building Bridges
- 28 Bergman Steps Down
- 30 Defining Moments in Philanthropy
- 31 Research Grants & Presentations
- 32 Awards & Announcements
- 34 Prepared for the Future
- 35 Alumni News
- 38 Events

Saul Rosen credits his wife, Helen, for his longevity.



Just a little bit of heart

Saul Rosen, DDS, at 101 is the oldest living alumnus of the world's oldest Dental School. Graduating from the Baltimore College of Dental Surgery in 1929, Rosen practiced dentistry privately and for the U.S. Army until retiring in 1985 at the age of 78. Remembered fondly in his yearbook as being a devoted student and friend, Saul also recalls hard times, fun, and frivolity from his University days.

STORY BY LYDIA LEVIS BLOCH

When Saul Rosen, DDS, was attending the Baltimore College of Dental Surgery (BCDS), University of Maryland Dental School, he was responsible for making up any shortfall in his quota of patients. He and his fellow classmates became dental school recruiters. Evenings after class, he and his fellow students—who were all male—would go out and search for patients. They found eager participants in the young women living near the School.

“Baltimore has some beautiful women, don’t you think?” he says today gleefully.

“We’d ask to look into their mouths to see if they needed any fillings,” he says of their efforts to fill their patient quota. “We’d haul the lucky ones off to the clinic and take care of them.” Filling a quota this way also had a side benefit. “One of the better students in my class met his wife that way,” Rosen recalls with a smile.

Rosen has been a dedicated supporter of the University, making an annual contribution for each of the last 80 years. This feat is certainly unmatched.

“It’s just a little obligation,” Rosen says. “It wasn’t much, I was happy to do it and decided it should be a yearly stint. I feel some loyalty to my alma mater.”

Though now living in West Orange, N.J., the centenarian has kept tabs on the Dental School.

Dean Christian S. Stohler, DMD, DrMedDent, recently paid the Rosens a visit. “We had a very good afternoon,” says Stohler. “To see a person at the age of 101, so vital and energetic, sitting at his computer, I think that’s fantastic.”

Rosen even visited the University of Maryland a few years ago. “I admired the buildings and looked over the equipment,” he says. “The difference was night and day since I trained.”

Asked for specifics, he replies, “Believe it or not, in school we used to lug around our instrument case and our own foot treadle engine to run the drill. Science classes and laboratories were housed in the old BCDS building on Howard Street, which was about

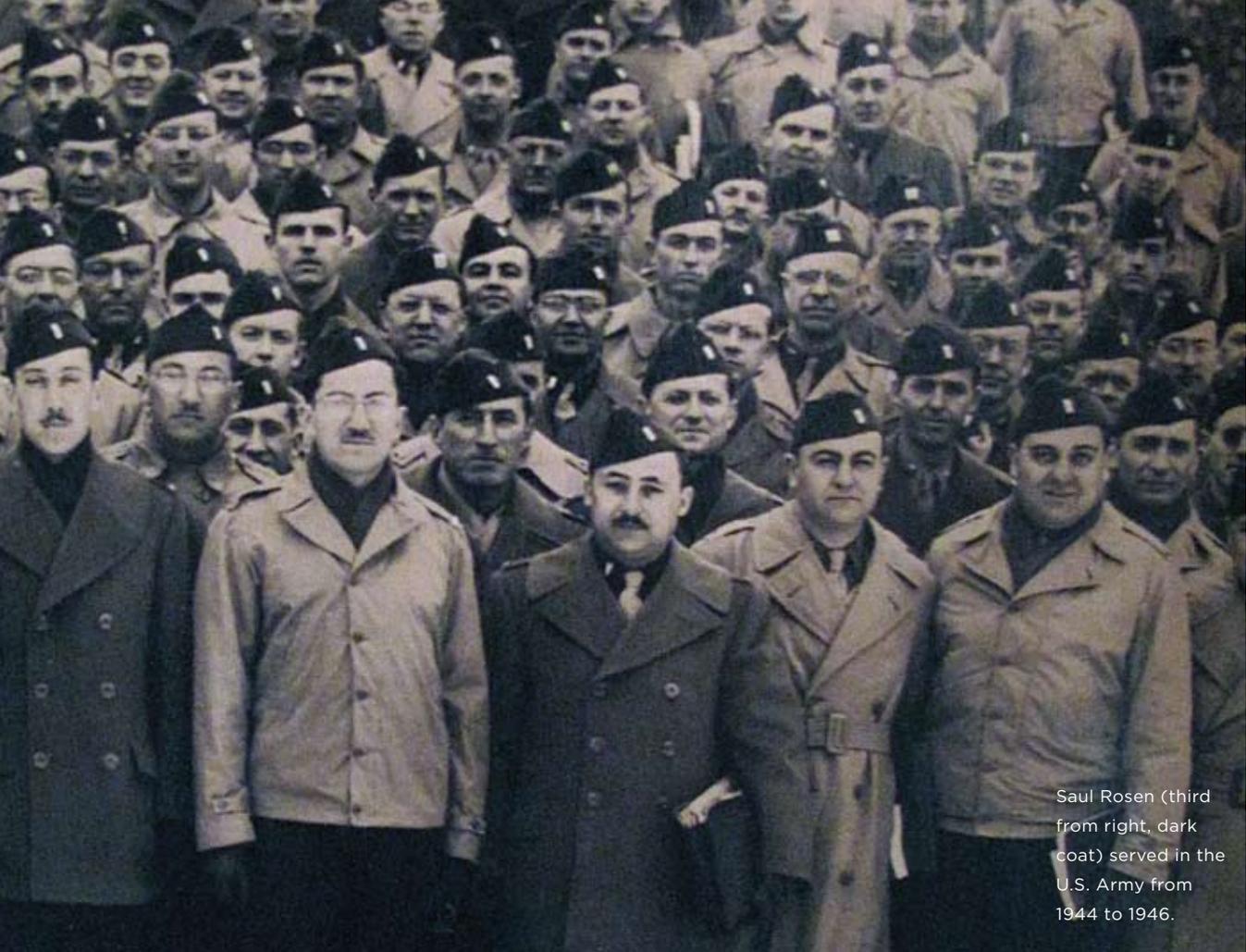


a two-mile hike from the Dental School at Greene and Lombard streets. Sure, we griped and complained a little, but we were young.”

The Class of 1929 graduated 90 dentists, all male. In his senior year, Rosen was nominated to the Gorgas Odontological Society because of his high grades. Humble by nature, Rosen says, “I was no genius, but we all studied hard.”

After passing both the Maryland and then the New Jersey state board exams, Rosen went to work for another dentist because he couldn’t afford his own practice, then opened his practice in Maplewood, N.J., in 1932. At the height of the Depression, life was a struggle for Rosen. In 1935 he collected about \$2,500 for an entire year’s work. In those days, a silver filling would cost \$5.

From 1944 to 1946, Rosen, a lieutenant in the Army, was drafted to serve as chief of the crown and bridge department at an Atlantic City military clinic, which functioned as a rehabilitation center for returning World War II veterans. After leaving the service, Rosen set up shop in a refurbished bungalow



Saul Rosen (third from right, dark coat) served in the U.S. Army from 1944 to 1946.

in New Jersey where he practiced general dentistry, as well as root canals and periodontia. He retired at age 78 in 1985.

Though Rosen describes himself as “a regular guy who hasn’t done anything tremendous,” he was active in the local Dental Society throughout his career. He always sought to improve general dentistry and even lobbied the state to add fluoride to drinking water. Among work and family he even found time to participate in amateur theatricals for the Dental Society and the Alpha Omega fraternity.

On his 100th birthday, Rosen received congratulatory messages from the likes of former President Bill Clinton, former Yankees manager Joe Torre, and Dean Stohler.

Rosen credits his wife for his longevity. “My good wife, Helen, she watches what I eat and that I take care of myself.” Helen and Saul just celebrated their 35th anniversary. The couple shares four children, 10 grandchildren, and 12 great-grandchildren.

Saul also suggests that his sense of humor has helped him live so long, too. He made sure Stohler

took some of his jokes back to Baltimore when the dean visited. Rosen likes to say he has kept his wild sense of humor, through good times and bad.

This and keeping active have allowed him to stay vibrant through a lifetime of experience. He stays active in various ways. A voracious reader, he is especially fond of *The New York Times* and mystery novels. He pays his bills online, and maintains a hefty e-mail correspondence with pals who share jokes.

Rosen has made a few concessions to the aging process, though. He now uses a walker and hearing aids. Although he suffers from continuous pain due to stenosis of the spine, he refuses to slow down.

“I try to stand the pain and that’s it,” he says briskly. Weather permitting, he walks outside every day. When the weather is bad he hops on his stationary bike and throws in a few arm and leg exercises.

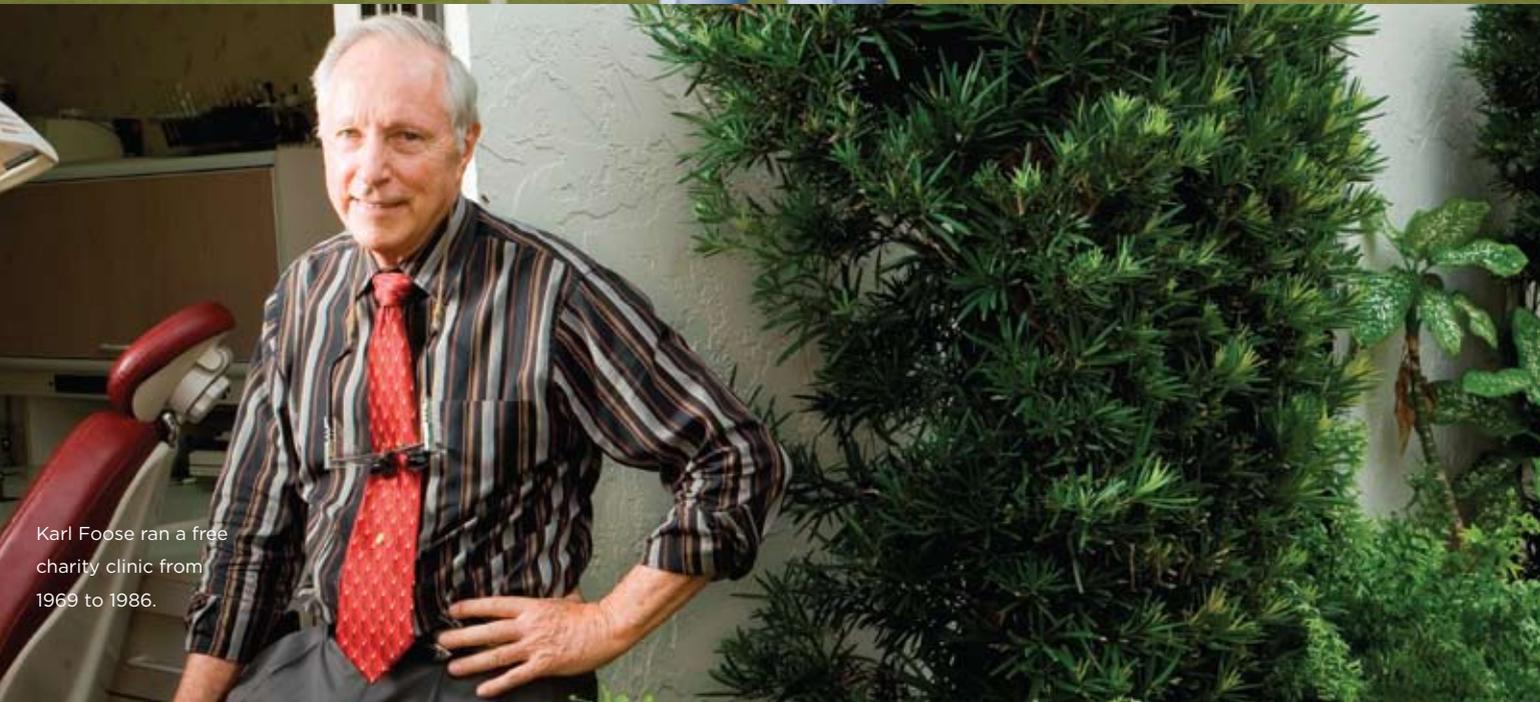
Rosen says he’s very proud to have graduated from the world’s first dental school. “BCDS did all right by me. I love the old school and absolutely feel connected.” ■



Joseph Bodo left his native Florida to attend the Dental School.



Paul Nestor chose dentistry over playing for the Colts.



Karl Foote ran a free charity clinic from 1969 to 1986.

Three alumni demonstrate the importance of measuring success through professionalism, generosity, and commitment—all in sunny Florida.

Three friends, five decades, one dental school

The late 1950s—Eisenhower was president, Elvis' star was ascendant, Sputnik I launched and fell, and the first fully reclining dental chair was introduced. Three young men, M. Paul Nestor, DDS '57; Joseph Bodo Jr., DDS '58; and Karl Foose, DDS '57, completed their training at the Dental School and went their separate ways.

While life, work, and family have taken Nestor, Bodo, and Foose far from Baltimore, more than 50 years after graduating, the three remain friends and professional colleagues. Nestor, Bodo, and Foose all settled in Florida after graduation, each establishing successful careers and raising their families in the Sunshine State.

STORY BY REGINA LAVETTE DAVIS

THREE BEGINNINGS

Bodo, a native Floridian, applied to the Baltimore College of Dental Surgery (BCDS) because there were no dental schools in his home state. When it came time for his admissions interview, he donned a thin jacket and headed north, aspiring to join a profession that helped people. Bodo was accepted on the spot. “I realized at that moment that this was my whole life in front of me,” he says.

Classmates Nestor and Foose both hailed from West Virginia. The two interviewed at the Dental School on the same day. Foose and Nestor were the last to be interviewed. They flipped a coin to decide who would go first. “I won two out of three tosses, and then he won three out of five,” says a chuckling Foose. “I was winning

“We had to learn the tough, hard way,” says Bodo. “We sent very few things to the laboratory. We understood what had to go on in a lab. We set up our own crown and bridge. We cast our own partial frames and we set up the dentures ourselves. The prosthetic laboratory in dental education today, of course, has changed, but it was a good training exercise in patience.”

Learning to be a professional also meant dressing and acting the part. “In those days there was no air conditioning in the buildings, but every day we each had to wear a white shirt, tie, and coat,” remembers Foose. “Students had to have their hair combed and faces shaved. You had to be immaculate or you were asked to leave the floor.”



Joseph Bodo



Karl Foose



M. Paul Nestor

four out of seven, when Dr. [Edmond] Vanden Bosch grabbed Paul, but Paul pushed me ahead of him.”

Both men were accepted, but Nestor had a bit of a conflict. As a former starter for the University of Maryland, College Park’s football team, and a veteran of the 1951 Sugar Bowl victory, he was drafted by the Chicago Bears in 1952 and traded to the Baltimore Colts in the summer of 1953. When the news made it to the pages of *The Baltimore Sun*, Nestor was faced with a choice: play or go to school. He chose the Dental School.

All three men recall the rigors of being professional students. They attended school for 40 hours a week and also kept up with a heavy load of homework.

In the clinic, ‘stand-up dentistry’ was the norm. Students who wanted to sit down in the clinic needed a doctor’s note. Standards were high and Foose recalls his professors fondly. “These were dedicated, true teachers who were always trying to bring the excellence out in you,” he says.

By graduation, Foose and Nestor in 1957 and Bodo in 1958, the three young dentists were ready to face the demands of the profession.

DENTISTS IN THE SUNSHINE STATE

The three friends built solid dental practices in Florida; Nestor and Bodo in Tampa and Foose in West Palm Beach. The men were attracted to Florida’s legendary beautiful weather. “It’s paradise living here,”

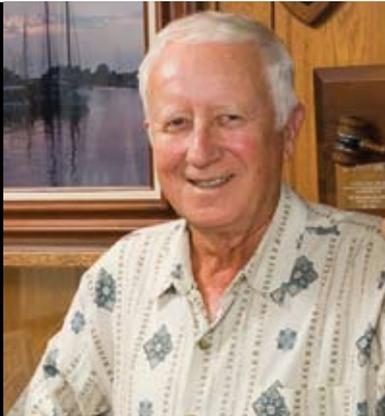
says Foose. “This is a community of good, basic people.”

Golf, swimming, and gardening keep all three fit and active. Their business skills have allowed Nestor, Bodo, and Foose to balance their lives, finding time for work, family, and relaxation.

As seasoned dentists, Bodo, Foose, and Nestor all agree on the importance of continuing education, and all are quite active in study clubs and continuing education programs. “You need to be a professional student all your life,” says Nestor.

Personal and professional camaraderie is also a necessity—for example, stepping in when a colleague is ill or away from the office. “When you are out of the office in a solo practice, everything shuts down,” says Nestor. “So, we look after each other and we try

“Doing a good job for patients and doing what fits their budgets is important. When you restore a patient’s mouth and hand him the mirror, and he feels elated, it’s very rewarding.” —M. PAUL NESTOR, DDS '57



Joseph Bodo



Karl Foose



M. Paul Nestor

to cover for one another.” Once, when Nestor spent three weeks in the hospital, it was Bodo and others who covered for him.

Being a professional also means participating in organized dentistry, according to Bodo. He cites the influence of one of his advisors at the Dental School, Joe Cappuccio, DDS '46, a former president of the American Dental Association. “Joe gave me insight into taking an active role. It’s important to give back, not only to the patients, but to the profession,” says Bodo.

All three attribute their thriving businesses to keeping their patients satisfied. “One of the biggest rewards is giving people back a smile again,” says Bodo. “In the denture section [as students], we put

people back to work who were on welfare.”

Bodo estimates that many people refuse to seek dental care because of fear and finances. “It’s gratifying treating this kind of patient when you can turn him or her into a patient who will regularly see the dentist,” he says. “It’s so rewarding to see generations of patients—children and grandchildren—and to see work that I’ve done hold up 40 years later.”

Nestor also finds the profession satisfying. “You improve people’s health and confidence. You can see great progress when people are compliant,” he says. “Doing a good job for patients and doing what fits their budgets is important. When you restore a patient’s mouth and hand him the mirror, and he feels elated, it’s very rewarding.”

ADVICE FOR YOUNG DENTISTS

Bodo, Foose, and Nestor agree that today's dental students must become proficient in more than just dentistry—they also must learn how to manage a business so they can better enjoy the fruits of their labor. "Practice management instruction is needed in the School," says Foose. "Students will be not only doctors, but businessmen and women as well."

Along with having sound business acumen, Nestor also would advise students and young dentists to simply "use that Golden Rule" in relating to people. In terms of best practices, he says, "Do your best. Communicate well and be cooperative. Know your procedure before you sell it to your patients. Find people in the profession who are ethical. Don't sell it if it's not on the shelf. There are giants in dentistry. Find somebody you can emulate."

Bodo, who says that hard work was part of his upbringing, has always been more comfortable giving than receiving, which helps him measure and balance his life. He believes that students should have acquired qualities like honesty, fairness, and truthfulness early in life. "I advise students to keep their lives in balance, to help others, and to give back."

Charity and giving back usually begin at home, and Bodo, Nestor, and Foose are all active in supporting their communities, as well as giving of their time to worthy endeavors. Foose ran a free charity clinic from 1969 to 1986 and also has a clinic named for him in Uruguay. To give his daughters a sense of perspective and a lesson in outreach, Foose has taken them on trips to Honduras and Haiti.

Students will find and characterize success in various ways, the men say. Success, believes Nestor, can be defined by "doing the best you can for the patient and giving good service over the years. It makes it easy to sleep at night with a clear conscience." Being able to have a reasonable income to raise your family and doing what you can to help people in a chari-

table way all contribute to being successful, he adds.

"I think success occurs, at least for me, when I can go to bed at night knowing that I tried to do a good job and tried to help someone," says Bodo. "Those who have succeeded in the financial area are not necessarily the happiest. Contentment, peace of mind, respect, family, and having love are what matter most."

STAYING CONNECTED

The three dentists also recognize the need to stay connected to their alma mater to help ensure the success of the institution. Bodo was among those alumni who returned for their 50-year reunion.

"I received an update on the prospects for the future and I was impressed by the facility," he says. "It was mind-boggling and astounding to walk through the building. I think every one of my classmates would have enjoyed it. I was most impressed by Dean [Christian S.] Stohler. He is easy to talk to and his heart is really there. I was struck by how humble, dedicated, and loyal he is to BCDS. He extends the hand of friendship to all. And a very important asset is that he leads the School into the 21st century."

Stohler is likewise appreciative of the trio's contributions.

"A great part of the School's success can be attributed to alumni like Drs. Bodo, Foose, and Nestor," says Stohler. "These three men never forgot their experiences here at our School, and they have always remained dedicated to the mission of BCDS. Alumni are really the backbone of the Dental School."

Their experiences and education at BCDS remain pivotal parts of the professional and personal lives of Bodo, Foose, and Nestor. Their commitment to professionalism, generosity, and loyalty continue, five decades later.

"I am extremely grateful for being accepted into the Dental School all those years ago," says Foose. "It gave me an opportunity to serve humanity." ■



Filling the biggest shoes

Dean for a Day program inaugurates its first honoree

ON MONDAY, AUG. 25, 2008, THE SCHOOL welcomed its first Dean for a Day. Conceived by Dean Christian S. Stohler, DMD, DrMedDent, the Dean for a Day program recognizes and celebrates alumni who graduated at least 50 years ago. The inaugural honoree was Leonard Henschel, DDS, a member of the Class of 1956, who resides in Naples, Fla., with his wife, Charlotte.

During his visit for the day, Henschel addressed students in the class of Edward Grace, DDS, MA, toured the building (from the roof to the basement), met faculty and staff, and had lunch with students. "The big thing I noticed here is change. Maryland was a good school and we received a good education," he said.

Henschel, who practiced dentistry for 39 years,

commented to the students he met, "What a wonderful opportunity you've been given in this amazing facility. It makes me want to start over again. You'll love being a dentist. It's a terrific profession."

Before he left, Henschel received a certificate from Stohler to commemorate the occasion. According to Stohler, the Dean for a Day will be continued as an ongoing method to reach out to and celebrate the contributions of alumni. "I have always been affiliated with schools where the alumni are part of the fabric of the institution," he said.

Speaking for members of his generation, the honorary dean quite aptly made the following observation: "We're from a different era, but to get to where you are today, you had to stand on our shoulders." ■

Enwonwu leads first world noma conference

He urges fellow researchers to proactively fight this disfiguring disease.

STORY BY REGINA LAVETTE DAVIS | PHOTOGRAPH BY ROBERT BURKE

“YOU DON’T NEED TO SEE 10 OF THESE children—you only need to see one.” With this introductory remark from Didier Pittet, MD, MS, of the Infection Control Program at the University of Geneva Hospitals, the first international Noma Day conference was under way.

Held in Geneva last May, under the patronage of former United Nations Secretary-General Kofi Annan, the conference convened medical experts, members of the media, academics, humanitarian groups, and government representatives to discuss the causes, treatments, and prevention of noma. A facial gangrene that begins as a small lesion inside the mouth, the disease can spread to the cheek and face in a matter of days, eating away the soft and bone tissues. Noma generally affects children between ages 2 and 6, causes extreme disfigurement, and has a 70 to 90 percent death rate.

Dental School research scientist Cyril Enwonwu, ScD, PhD, MDS, urged fellow researchers, governments, and others to take proactive measures to prevent the spread of noma, a disease that affects up to 140,000 children annually, primarily in underdeveloped communities in sub-Saharan Africa, Asia, and South America. Traditional measures have been focused on reconstructive surgeries; however, Enwon-

wu is leading the charge to redirect the focus toward prevention, which will negate the need for surgeries.

“Noma is a disease that can be prevented,” said Enwonwu, who delivered the opening plenary lecture and served as the co-chair of the scientific committee. The infection and spread of the disease is based on malnutrition, poverty, and unsanitary conditions.

“Malnutrition starts before birth. This is a continuation of prenatal malnourishment. We have paid poor attention to maternal health, as certain conditions are programmed before birth,” explained Enwonwu. After birth, children in Third World countries often share living areas with or in close proximity to livestock and eat foods prepared with a polluted water supply. More recently, there is an association between cases of noma and HIV, noted Enwonwu.

Prevention measures include promoting exclusive breast-feeding for three to six months after birth, immunizations against endemic diseases (such as measles), improved oral hygiene, segregation from livestock, and improved maternal health and education. For those



Cyril Enwonwu says, “Noma is a disease that can be prevented.”



afflicted children who survive, surgical intervention has been the course of action. However, the young patients must endure multiple surgeries that usually result in severe scarring. Unfortunately, the scarred children often are ostracized and remain outcasts in their villages. Consequently, Enwonwu is pushing for greater awareness and funding aimed at prevention.

The conference was well attended (using United Nations-style translations in French and English), with various parts of the world represented by speakers who discussed the history of the disease, current research, and medical and surgical treatments. En-

wonwu's opening address provided background on the disease, its risk factors, and its epidemiology.

Reshma Susan Phillips, PhD, who was mentored by Enwonwu at the University of Maryland, presented a talk concerning the role of micronutrient deficiencies and measles. Phillips pointed out the role of vitamin A and zinc, and provided examples of stunting before age 1.

Enwonwu and Phillips also addressed the participants during the question-and-answer session, where queries were posed relating to medical and social issues, gender differences in the disease, and maternal nutrition.

"This was a great occasion to raise awareness by bringing together researchers from all parts of the world," Phillips said after her presentation. She hoped the event would benefit future research and stimulate efforts toward prevention methods.

"We need to use the knowledge at our disposal to move forward toward more intervention," Enwonwu added. He noted the need to attract donors to fund research, education, and prevention activities for a condition that unfortunately often takes a back seat to other more high-profile diseases.

Enwonwu is a full-time faculty member at the University of Maryland Dental School and an adjunct faculty member at the School of Medicine. His research on noma has appeared in journals such as *The New England Journal of Medicine* and *The Lancet*. He is credited with helping to establish the Noma Children Hospital in Sokoto, Nigeria, in 1999 and was the honorary chairman of the hospital board for four years.

The conference was organized by the International No-Noma Federation in association with the World Health Organization and the World Dental Federation. Information on the conference can be found at www.nonoma.org. To receive specific information on the School's work on noma, its partner organizations, and details on the Noma Research and Treatment Fund, send an e-mail to DentalODAR@umaryland.edu. ■

Reorganized and refocused

A restructuring of the School's research arena promises new gains in the future

STORY BY REGINA LAVETTE DAVIS | PHOTOGRAPH BY STEVE SPARTANA

The new academic year was ushered in with an exciting development in the research arena. Two research intensive departments—Biomedical Sciences (BMS) and Diagnostic Sciences and Pathology—were restructured to become three new divisions: Microbial Pathogenesis, chaired by Patrik Bavoil, PhD; Neural and Pain Sciences (NPS), chaired by Joel Greenspan, PhD; and Oncology and Diagnostics Sciences, co-chaired (interim) by Renty Franklin, PhD, and Bernard Levy, PhD.



From left: Renty Franklin, Joel Greenspan, Patrik Bavoil, Bernard Levy

According to Dean Christian S. Stohler, DMD, DrMedDent, this very significant re-engineering addresses the School's core areas of research: microbiology, pain, and cancer. Areas in which there may have been overlaps or parallel research concerns across departments are now fine-tuned into a new structure that places the strengths of the researchers in a more suitable context.

According to Greenspan, the reorganization grew out of the extremely successful BMS department. "BMS's growth, under the direction of Ronald Dubner [DDS, PhD, former chair], led to three well-developed research specialties," he said, adding that

those core areas "grew to the point that they could function as autonomous departments."

Added Franklin: "The consolidation of the 'cancer researchers' in the old pathology, oral medicine, oral diagnosis, and radiology components with the former BMS department into a single department will mean the creation of a critical mass of research interest and clinical resources." He added that his new department is better able to take advantage of more translational research funding opportunities.

The NPS department encompasses the field of neuroscience, with particular emphasis on pain. "This is a scientific area of long-standing and criti-

cal importance to dentistry, as well as other areas of medicine. The Dental School will be recognized as the first, and so far only, school with such a department,” said Greenspan.

In the microbiology area, the change signals a “renewal of the research enterprise at the School. We are building on strength acquired under the leadership of Ron Dubner in the old Department of BMS,” said Bavoil. He also sees the change as a positive development for a more research-enriched curriculum based on pain, cancer, and microbiology themes.

The new chairs already have noticed how these changes have positively affected their departments. For some, a key benefit lies in the more autonomous nature of the new areas.

“Strength is always gained from being independent, particularly for a smaller department such as microbial pathogenesis,” said Bavoil. He explained that his team is chiefly concerned with “the science of knowing what one is up against during an infection at a molecular or cellular level of details. Microbial pathogenesis is translational by definition.”

The alignment of similar research under one umbrella can lead to a more productive enterprise. According to Franklin, the change “makes it easier to take advantage of the available cancer research expertise in the new department. It will engender significant cross-fertilization of ideas and projects.”

PAVING DISTINCT PATHS

With roles now firmly established, each department has clearly defined its goals. The oncology group’s primary goal is to capitalize on the concentration of cancer research and clinical expertise in a single department and to build on joint resources that have been created by the reorganization. “The combination of oral medicine with basic science

cancer research will provide a unique research opportunity that may not exist anywhere else in the country,” Franklin said.

Although Bavoil said he prefers a small department, which encourages a more collegial nature, he would like to recruit two or three more faculty members to his team. “A strong research enterprise is also a model for analytical, quantitative, and critical thinking that can only benefit students. That our department is not specifically engaged in oral research tends to raise eyebrows,” said Bavoil. “However, this is a shortsighted reaction as the modern dentist will necessarily receive training beyond oral/dental health. Bugs don’t stop at the teeth, and conversely, oral health is more and more revealed to be intimately linked to systemic health. The same critical thinking that is the nerve of outstanding research is also the nerve of evidence-based dentistry.”

Like the other departments, the NPS foci are research and teaching. Greenspan has clear objectives for both. “Our primary research goal is to be a worldwide recognized center for pain and sensorimotor research. This goal includes basic and clinical science, as well as the translation of basic science advances to clinical application,” he said. The teaching goals are twofold. For dental students, the goal is to provide the best education possible in the scientific underpinnings of biomedicine as it relates to dentistry. For those with an interest in neuroscience, Greenspan said the goal is to “provide the best education in the conduct of science and the field of neuroscience.”

Along with a clear sense of purpose, several unique leveraging points have been identified by these leaders. Bavoil described his ninth-floor lab as “a beehive of activity, full of talented postdoctoral fellows, and graduate students from the various Graduate Program in Life Sciences [GPILS] programs. They are attracted to our labs because we are doing exciting research, because our faculty are dynamic people

“Strength is always gained by being independent.”

—PATRIK BAVOIL

who are well-established in their fields, because our labs are by and large well-funded, and because we are publishing well and in high-impact journals.”

For certain types of cancers, such as head, neck, and oral cancer, Franklin said that “the new department structure will bring together unique resources and a unique patient population that will allow for innovative research in cancer early detection and prevention.” The oral medicine component of the new department’s structure could provide patient samples at very early stages that make definitive diagnosis impossible using today’s standard criteria.

Having faculty who are scientists and clinical specialists makes NPS unusual, according to Greenspan. “Thus, you could say we are refashioning the model of departmental organization in the School so the departments will not be strictly basic science versus clinical. This provides for faculty and staff with a variety of scientific and technical expertise to work together and interact in ways that they can learn and benefit from one another’s skills and knowledge.”

COLLABORATIONS MAKE A DIFFERENCE

No matter how focused and excellent the level of research, the ability to move forward to advance the science depends on collaborations internal and external to the departments, the School, and the campus. Fortunately, the departments continue to expand in their areas of collaborative investigations.

“Before the restructure, our labs already had a network of collaborations on and off campus,” said Bavoil. “As chair, I will continue to encourage pursuing new collaborations while optimizing those that already exist. For instance, my own laboratory has collaborations with scientists in Europe, China, and Australia, and closer to home, with the Institute for Genome Sciences at the School of Medicine.”

The positions that the faculty hold outside of the Dental School also can play an essential role in creating a context that drives collaborations. “All the faculty in NPS are also faculty in the UMB GPILS and the UMB Program in Neuroscience. Several of these faculty members have collaborative projects involving peers in other schools in UMB or at other universities,” said Greenspan.

On-campus collaborations, he said, include the Department of Diagnostic Radiology in the School of Medicine, and the schools of Nursing and Pharmacy. Off-campus collaborations include College Park’s School of Public Health, the University of Pittsburgh’s medical school, Johns Hopkins medical school, Georgia State University, and the National Cancer Institute.

Franklin noted that members of his department have appointments in the University of Maryland Marlene and Stewart Greenebaum Cancer Center, which funded a grant for the prostate cancer group of the oncology department for a project to investigate prostatic fluid zinc and citrate levels as biomarkers for prostate cancer. Dental School scientists also are collaborating with researchers at Durham University in the United Kingdom and the Medical University of South Carolina on the development of citrate and zinc biomarkers for prostate cancer, and with researchers at the University of California, San Francisco on detecting prostate cancer and metabolic changes with cancer.

These changes in the departments are designed to create long-range benefits to enrich the faculty, advance the science, and give students an enhanced perspective of modern research. With research, as in other pursuits, it often takes the minds of many to achieve a single answer. ■

Broad Expressions

The research enterprises in the School are diverse, collaborative, and novel investigations that are unraveling complex problems. Several researchers are on the cutting edge of resolving these scientific challenges.

STORY BY REGINA LAVETTE DAVIS | PHOTOGRAPHY BY STEVE SPARTANA

MEENAKSHI CHELLAIAH, PHD ASSOCIATE PROFESSOR

In the Dental School Since: 2000

Research: My lab focuses our research efforts on studying how bone cells (osteoclasts) and cancer cells (prostate cancer and human melanoma cells) use adhesive feet-like structures to migrate. This occurs during the bone breakdown process (bone resorption) or invasion/metastasis. We study the mechanisms of actin cytoskeletal regulation in the processes of cell migration and bone resorption. My lab uses different biochemical, cellular, and molecular approaches to understand the regulatory mechanisms of cell migration. My lab discovered that overactive osteoclasts or cancer cells can cause osteoporosis.

Studies from my lab have the potential to provide leads for the pharmacological control of cell migration to combat osteoporosis and cancer-induced bone loss. This may also open up new and elegant strategies to manipulate osteoclast bone resorption that occurs during periodontitis. Postdoctoral fellows Samanna Venkatesababa, PhD, and Tao Ma, PhD, and graduate students Bhavik Desai, PhD, and Brian Robertson, PhD, contributed to these studies.

Grants: Since 1998, “Regulation of Signaling in Osteoclast Bone Resorption” has been funded by the National Institute of Arthritis and Musculoskeletal Diseases (\$1,193,314).

Collaborations: National and international collaborations have provided valuable resources necessary to conduct current research: chemical compounds (e.g., bisphosphonates), DNA constructs, and gene knockout mice for gelsolin, osteopontin, CD44, and 1-plastin proteins. Collaboration includes the following scientists and institutions: Michael Rogers, PhD, University of Aberdeen, United Kingdom; Shuh Narumiya, MD, PhD, Kyoto University, Japan; Jayne Lesley, PhD, The Salk Institute; David Denhardt, PhD, Rutgers University Nelson Laboratories; Heinz Furthmayr, MD, Stanford University School of Medicine; Dhan Kuppaswamy, PhD, the Medical University of South Carolina; Steven Zhan, PhD, School of Medicine; and Susan Rittling, PhD, Harvard Dental School.

By collaborating with various scientists, I can discuss ideas and sharpen my knowledge of the cutting-edge research occurring within this field. The Dental School and its students benefit from



Clockwise from top: Ke Ren, Meenakshi Chellaiah, Jin Ro, and Radi Masri

the collaborations that their professors make with outside schools and organizations. Collaborations help to maintain the top-notch reputation of the School and allow scientists to exchange ideas and products to facilitate each other's research efforts. Without this exchange, progress within the field of bone/cancer science would slow drastically. By working together, we can move the field forward and achieve much more. In addition, collaborations are necessary to create a grant application with a multidisciplinary approach. The synergy of ideas created by collaborating accelerated the advancement of science within this field.

Reflects Our Vision And Mission Because: The University of Maryland Dental School seeks to graduate exceptional oral health care professionals and to contribute to the scientific basis of treatment for diseases of the orofacial complex. A strong understanding of how bone cells function is crucial to the education of dental professionals. The research findings from my

lab have been incorporated into my lectures to provide recent information on how bacterial infection can lead to bone loss at the molecular level. I am assigned to give lectures on topics such as bone cells, bone remodeling, structure of the bone, and signaling mechanisms. In my lectures, I have included some of the recent technical developments in signaling mechanisms and their role in osteoclast function and other cell functions in general. Extra emphasis has been given on the signaling mechanisms by which bacterial infection can lead to soft and hard tissue loss during periodontitis. Students gain basic and applied knowledge when they learn about the results from our labs.

Mentorship: I mentor graduate and undergraduate students as well as postdoctoral fellows in my lab.

Rewards: Mentoring research students and observing them achieve their academic goals is a highly rewarding aspect of working in the research profession.

“Collaborations help to maintain the top-notch reputation of the School.” –MEENAKSHI CHELLAIAH

High school, undergraduate (from the University of Maryland, Baltimore County and Villa Julie College), and dental students obtained research training from my laboratory. Students’ research outcomes were published in peer-reviewed journals and they were given co-authorship in these publications. It is very fulfilling for me to have these students learn modern research methodologies in my lab and develop an interest in biomedical research and blossom into competent professionals in the biomedical field. Also, I enjoy sharing my research with the national and international scientific community. I have had the honor of presenting my work at various universities and international meetings. The opportunity to develop new techniques and explore the fascinating aspects of bone/cancer science is an aspect of research that is inherently rewarding.

RADI MASRI, PHD, BDS, MS
ASSISTANT PROFESSOR (DENTAL SCHOOL AND SCHOOL OF MEDICINE)

In the Dental School Since: 2001

Research: Biomedical research that is concerned with mechanisms of chronic pain in the central nervous system and methods of treatment. I also teach in the graduate prosthodontics program.

Grants: I just started my own lab, with startup funds from the dean’s office and from a grant from the UMB Organized Research Center on Persistent Pain. I am in the process of submitting an application for funding from the National Institutes of Health (NIH).

Collaborations: I am collaborating with Asaf Keller, PhD, in the Department of Anatomy and Neurobiology in the School of Medicine. In the Dental School, there is ongoing collaboration with Norman Capra, PhD, and Jin Ro, PhD. These interactions are very important, especially for brainstorming. It generates many ideas that help shape the research program we are conducting and makes the experience of research more exciting and interesting.

Reflects Our Vision And Mission Because: The research I am conducting is aimed at providing relief from conditions that currently have no treatment. This affects a large percentage of the population and is in agreement with the School’s mission of public service. Further, the collaborative efforts with the School of Medicine help integrate the Dental School within the broader campus. The research that is conducted in my lab, together with that of all the investigators in the School, is aimed at enforcing the positions of the School and the University as leading teaching and research institutes in the country.

Mentorship: I mentor 10 master’s students in the Prosthodontics Residency Program and one PhD student in the Graduate Program in Life Sciences.

Rewards: There are many rewarding aspects, but the most is the satisfaction that comes from teaching. Also rewarding is the challenge of trying to understand complex neurobiological interactions and finding answers to them.

SILVIA MONTANER, PHD, MPH
ASSISTANT PROFESSOR

In the Dental School Since: 2005

Research: We are focused on the study of Kaposi's sarcoma (KS), the most common tumor seen in AIDS patients and the leading pediatric cancer in some countries, such as those in sub-Saharan Africa. KS is a vascular tumor that affects different tissues, including the oral mucosa. Indeed, KS is sometimes first diagnosed by dentists when they find KS lesions in the oral cavity. This tumor is caused by infection with the KSHV/HHV8 virus. One KSHV gene, vGPCR, is responsible for causing KS development. Of interest, saliva is known to be a reservoir for this human herpes virus.

In our lab, we are interested in studying the molecular mechanisms used by the KSHV vGPCR gene to cause Kaposi's sarcoma. We use *in vitro* and *in vivo* approaches. In particular, we have developed a high throughput transgenic mouse model in which we can express different genes in the vascular endothelium of mice using retroviral transduction. Another interesting thing about studying the molecular pathogenesis of KS is that this vascular tumor is a very valuable model for pathological angiogenesis.

Grants: We have a five-year, \$1.4 million grant from the National Cancer Institute for "Molecular Targets for the Prevention and Treatment of Kaposi's Sarcoma," which will identify molecular targets for the prevention and treatment of KS.

Collaborations: Key collaborations are ongoing with Kevan Shokat, PhD, at the Department of Cellular and Molecular Pharmacology, University of California, San Francisco; Brendan Manning, PhD, at the Department of Genetics and Complex Diseases, Harvard University; Ronald de Pinho, MD, Dana Farber Cancer Institute; and Silvio Gutkind, PhD, at the National Institute of Dental and Craniofacial Research (NIDCR), NIH.

Reflects Our Vision And Mission Because:

We are particularly interested in answering questions related to oral cancer. In particular, we are interested in studying the molecular pathogenesis of KS with the goal of finding novel molecular-based therapies for this tumor. In addition, as a model for pathological angiogenesis, the study of KS may help us understand the molecular mechanisms involved in pathological angiogenesis, an event associated with the development of all solid tumors.

Mentorship: I have five people in my lab, a research specialist, a postdoctoral fellow, two graduate students engaged in the PhD program, and a second-year medical student.

Rewards: Finding better treatments for cancer patients. For example, we have identified that the Akt/TSC/mTOR pathway is one of the key signaling pathways activated by KSHV vGPCR to cause KS. Today, rapamycin (an mTOR inhibitor) is successfully used in the treatment of patients with KS.

KE REN, PHD | PROFESSOR

In the Dental School Since: 1995

Research: Pain mechanisms.

Grants: "Glial-Cytokine-Neuronal Interactions in the Mechanisms of Persistent Pain," 2008-13, \$1,093,750; "Mechanisms of Persistent Temporomandibular Pain," \$1,125,000 (PI); "Central Glia/Cytokines and Descending Facilitation in Neuropathic Pain," 2007-12, \$1,125,000, Co-Investigator (PI: Feng Wei, MD, PhD); "Descending Modulation of Behavioral Hyperalgesia After Injury," \$1,125,000, Co-Investigator (PI: Ronald Dubner, DDS, PhD).

Collaborations: I have been collaborating with Brian Berman, MD; Lixing Lao, PhD; and Rui-Xin Zhang, PhD, all of the Department of Family Medicine in the School of Medicine, to conduct re-



Meenakshi Chellaiah



Radi Masri



Silvia Montaner

search on the mechanisms of acupuncture. In addition, there is collaborative research conducted with Alla Khodorova, PhD, and Gary Strichartz, PhD, both from the Pain Research Center, Department of Anesthesiology, Brigham and Women's Hospital, at Harvard University. The study of cutaneous innervation and the effect of inflammation and hyperalgesia is another area of investigation with Frank Rice, PhD, of Albany Medical College. Two international projects include collaboration with Koichi Iwata, MD, PhD, from the Department of Physiology, School of Dentistry, Nihon University, Japan, on tri-geminal pain processing and with K. Noguchi, MD, PhD, of Hyogo Medical University, Japan, to study the dorsal column pathways and neuropathic pain.

The active interaction with other laboratories facilitates the progress in research and helps to establish and maintain the reputation of the University as a leading academic institution.

Reflects Our Vision And Mission Because:

My research is consistent with the mission of the School to be an educational institution involved in biomedical research. The projects on orofacial pain mechanisms are particularly relevant.

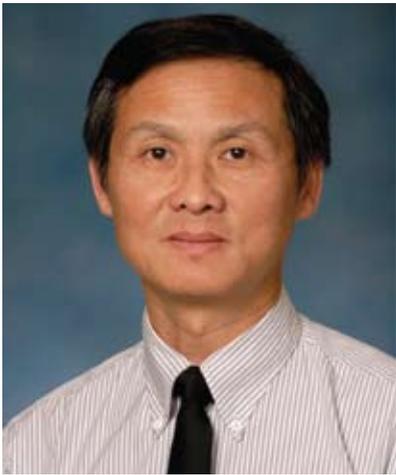
Rewards: The outcome will benefit patients suffering from chronic pain disorders.

**JIN RO, PHD | ASSOCIATE PROFESSOR;
DIRECTOR FOR THE COURSE ORAL
AND MOTOR FUNCTION**

In the Dental School Since: 1998

Research: My research focuses on the neurobiology of acute and persistent craniofacial muscle pain. In addition to research activities, I am involved in teaching various dental and postgraduate courses. I serve as a course director for the course Oral and Motor Function offered to postgraduate students.

Grants: Two projects are funded by the NIDCR. The first examines the pro-nociceptive and pro-inflammatory role of peripherally localized excitatory amino acid receptors. We are using a multi-disciplinary approach to study the functional contribution of these receptors under acute and persistent muscle pain conditions. The second (for \$1.8 million) focuses on examining novel mechanisms by which sex differences in peripherally applied opioid agonists are expressed in the context of inflammatory pain conditions. The central hypotheses of this



Ke Ren



Jin Ro

“The School provides an outstanding environment for neuroscience and pain scientists.”

—RADI MASRI

project are that sex differences in peripheral opioid receptor mechanisms are expressed at multiple levels in primary afferent signaling processes and that injury or inflammation differentially impact peripheral opioid receptor signaling between the sexes.

Reflects Our Vision And Mission Because:

The Dental School has broad and cross-disciplinary research programs in a number of thematic research areas related to oral and craniofacial biology. In addition, there are departmental, University-wide, and regional resources that will facilitate the growth of individual research scientists. The School provides an outstanding environment for neuroscience and pain scientists. With a recent reorganization of basic science departments that emphasizes the strength of neuroscience and pain, my research programs fit in perfectly with the vision of the School. The change will further support our goal to establish a world-renowned muscle pain research laboratory here in the Dental School. I feel confident that we can continue to play a valuable role in this respect and serve scientific and academic communities at the Dental School.

Rewards: To provide novel findings that help unravel mechanisms involved in the etiology and

pathology of many chronic pain conditions that affect a large percentage of the population. These findings advance the field and lead to developing rational and evidence-based treatment and management for many pain patients. In the past few years, we have introduced several animal behavioral models that can be used to test mechanism-based hypotheses in the development and maintenance of painful conditions involving craniofacial deep tissues. Using these novel and innovative tools with more innovative ideas, we hope to continue to provide important scientific information that will ultimately benefit chronic pain patients.

Mentorship: Over the years, I have had a number of students at various levels (high school, college, dental, graduate, and a visiting professor) rotate through my lab. Currently, I am mentoring a graduate student from the Program in Neuroscience in the GPILS program, a DDS/PhD student, a third-year dental student, and a postdoctoral fellow. ■

Breaking barriers and building bridges

Student Jessica Lee strives to help children avoid the dental pain she once endured.

STORY BY MARY OTTO



JESSICA LEE HAS ALWAYS HAD A PASSION FOR helping. But when she learned of the death of a Prince George’s County child, 12-year-old Deamonte Driver, of an untreated dental abscess in February 2007, her sense of mission reached a new level of intensity.

“Deamonte Driver broke my heart,” she says.

It was that year, her first at the University of Maryland Dental School, that she dedicated herself to getting oral health care to poor children as a Baltimore Albert Schweitzer Fellow. The fellowship, dedicated to fostering Dr. Albert Schweitzer’s legacy of service to the underserved, is annually awarded to Baltimore-area students enrolled in health and human service degree programs. Fellows design their own service projects and work with existing community agencies to address unmet needs within the community.

Lee has personal insight into the pain of children without access to dental care. In her early years, she herself was one of those children, suffering with caries in Prince George’s County.

“I was the one with all the front teeth decayed,” says Lee, now 25. “There are so many barriers.”

She eventually received the care she needed. But Deamonte’s death came as a tragic reminder that only three in 10 children enrolled in Maryland Medicaid were getting dental care. Lee used her

fellowship year to create and coordinate an initiative called Healthy Smiles for Baltimore Kids. Implemented in several area after-school programs, Healthy Smiles targeted second- and third-graders by providing educational lessons and activities designed to teach oral hygiene and good health. In addition, she encouraged the children to stand up and advocate for their own dental care.

“I wanted to actively teach them,” Lee says. “It is difficult. You will face barriers. But approach your parents or guardians. Explain the urgency if you have had an infection that keeps you from concentrating.” She wanted the children to know “they can make a difference in their own lives.”

And Lee did not stop at after-school activities. She also organized a Healthy Smiles for Baltimore Kids community health fair that featured games and nutritious snacks, as well as fluoride varnishes and referrals supplied by the Dental School’s pediatric dental clerks.

Lee was helped by faculty mentors Norman Tinanoff, DDS, MS, and Clemencia Vargas, DDS, PhD, MPH, who have also made the care of poor children central to their work. They have been deeply impressed by Lee’s dedication, energy, and leadership skills.

“Jessica is really an exceptional student in all



Jessica Lee (front row, center) and her community health fair colleagues

regards,” says Tinanoff.

Vargas agrees. “She really believes that our mission as dentists needs to include the underserved,” she says. “She has participated in practically all community activities we have planned. Not only does she participate, she takes charge and helps with the organization.”

Lee also won the admiration of fellow students. Lauren Errington watched Lee at work with the children in the after-school program. “In her session, her caring nature radiated from her,” Errington recalls. “That was what I wanted to do!”

Lee has always been driven to help. Her mother, Rosa Lee, a bank clerk who emigrated from Korea and raised three daughters alone, has served as a guiding light. After the family moved to Ellicott City, Lee’s mother encouraged 12-year-old Jessica to start volunteering at a local senior center, playing bingo and visiting with the elderly residents.

“It really made me learn that I can make a difference,” she recalls.

Lee attended River Hill High School and went on to Johns Hopkins University, where, as a freshman, she founded a Brownie Girl Scout troop for local girls. She led the troop throughout her undergraduate years.

“Seeing the girls week after week,” says Jessica, “I got more out of that than I was able to give.”

In the summer of her sophomore year at Hopkins, she worked at a rural health clinic in Ghana, getting a firsthand look at the ravages of malaria, sickle-cell anemia, and infant mortality. She graduated in

2005 from the Johns Hopkins University Bloomberg School of Public Health with a Bachelor of Arts in public health studies. At the Dental School, she has continued to immerse herself in the study of getting care to underserved communities.

“Jessica brings a strong undergraduate background in public health and experience in community work,” says Vargas. Lee “has a very clear understanding of the health situation of underprivileged groups in society.”

The fellowship involved 200 hours of community service, which required her to balance that activity with her academics. Other students have asked her “How did you do the Albert Schweitzer and all your classes?”

“It’s manageable,” she counsels. “But you have to plan it out right ... managing, balancing. It actually helps if you enjoy it.”

Now that Lee has completed her fellowship year, her Healthy Smiles for Baltimore Kids will continue under three new Schweitzer fellows whom Lee has mentored: Errington and classmates Christopher Widmer and Jason Raines.

Errington says she is proud to follow in Lee’s footsteps. “Jessica Lee really is a fantastic person,” says Errington. “She is a Wonder Woman!”

Lee is modest about her achievements. But she is determined to go on from here.

“I hope to be able to specialize in pediatric dentistry,” she says. “There is so much more that I can do.” ■

Bergman steps down

A reflection on a friend's departure

STORY BY ROBERT ORD, ORAL-MAXILLOFACIAL SURGERY CHAIR

STEWART BERGMAN, DDS, MS, KNOWN TO all as “Bergie” or “Stew,” retired from his full-time faculty position last December. He had been a loyal, reliable, and stabilizing influence in the Department of Oral-Maxillofacial Surgery (OMS) since 1972.

Bergman is known to several generations of the OMS alumni and undergraduate dental students, having trained them in the principles and practice of basic oral surgery. In addition, he was responsible for administrating the undergraduate dental student academic program, lectures, and clinical sessions in the Dental School.

“Stew” always managed to retain his patience and good humor, despite the frustrations of undergraduate teaching, for more than 30 years. He taught the OMS residents dento-alveolar surgery, sedation/anesthesia, pain control, medical management of patients, and, for many years, trauma. When needed at night for severe infections and other emergencies, “Dr. B.” was “Mr. Reliable” and available to the residents. He published widely in his fields of interest of pain control, pharmacology, and medically compromised patients, and lectured nationally to scientific groups.

Raised in Brooklyn, N.Y., his initial interest in science fiction led him toward becoming an astronaut; however, he later turned to dentistry.

From 1964 to 1968, he attended dental school at the University of Buffalo and was undecided between a career in oral-maxillofacial surgery and periodontics. In 1968, during his general practice residency at the University of Rochester, he opted for OMS—and the rest is history.

Stewart met his wife, Gail, at a Brooklyn College fraternity party when he was home on vacation, but after a few dates they lost track of each other when he returned to school. After four long years, an act of fate reunited them at Thanksgiving in 1967. This time Stewart was not going to risk losing Gail. In a whirlwind courtship, they were engaged two days before New Year's Eve and married in August 1968. This may seem very impetuous for Dr. Bergman, but he knew exactly what he was doing and he and Gail have been happily married for 40 years.

After his marriage, Bergman completed his OMS residency training in Rochester in 1972 after being mentored by Bejan Iranpour, DDS, who influenced him toward a career in academics.

In 1972, Bergman joined the University of Maryland's faculty. He describes the faculty as a close-knit family. He recalls being introduced to afternoon tea by Duane Devore, the Oxford-trained PhD, and the spectacular Mary Mervis Delicatessen corned beef sandwich from Lexington Market, while



Don Tilghman, DDS, introduced him to the joys of sailing the Chesapeake Bay.

Bergman lectured and mentored more than 3,000 dental students and 70 residents. He was promoted to associate professor in 1976 and full professor with tenure in 1988. He obtained his master's in pharmacology in 1986. He served as program director for the residency in OMS at Johns Hopkins and interim chair at Maryland. Stewart was a principal investigator or co-investigator on more than 20 grants and published more than 50 papers.

We were sorry to see Stewart go as our senior faculty member and we wish him well in his retirement. I am hoping he has not left us completely and

may be able to continue to share his knowledge and experience with us by continuing to do some part-time clinic coverage at the School.

On a personal note, I have had the privilege of working with Stewart for almost 20 years (although it does not seem that long). He has been a great friend and colleague and a fine role model. When Dr. James Hupp departed from BCDS, Stewart and I were the only two faculty members left to retain the entire department, and we were successful in this endeavor due to Stewart's hard work. I am very glad I have had the opportunity to work with him and get to know him. We all wish him well in his retirement. ■

Defining moments in philanthropy

Marcelena Holmes discusses innovative approaches to creating meaningful donor opportunities.



WRITTEN BY MARCELENA S. HOLMES | EXECUTIVE DIRECTOR OF DEVELOPMENT
AND ALUMNI RELATIONS

DISCUSSIONS REGARDING OUR FRAGILE economy are front and center. Many of my colleagues express great trepidation about world markets and their potential adverse effects on charitable giving. Past giving trends indicate that economic recession is usually a precursor to a decline in charitable contributions. Although hostile financial climates affect philanthropy, they do not change the heartfelt compassion of those who view giving as a means to fulfilling their life's purpose. Holocaust survivor and psychiatrist Viktor Frankl articulates this idea with great eloquence in his book, *Man's Search for Meaning*:

"A human being is not one thing among others; things determine each other, but man is ultimately self-determining. What he becomes—within the limits of endowment and environment—he has made out of himself. In the concentration camps, for example, in this living laboratory and on this testing ground, we watched and witnessed some of our comrades behave like swine while others behaved like saints. Man has both potentialities within himself; which one is actualized depends on decisions but not on conditions."

There are many ways to give to institutions that are making a difference in the lives of others. As the new chief development officer, one of my objectives

is to help donors discover innovative ways to give back to the School. For example, alumni who have private practices can donate their services to patients as an incentive for them, in turn, to make a cash contribution to the Dental School. Patients can express their gratitude for exceptional care by making a gift to the School in honor of a dentist.

Many of our alumni have strong corporate relationships with vendors. Now is a good time to encourage vendors to give back to their communities by making an in-kind or cash gift to the Dental School. Each scenario provides a tax benefit to the donor. Individuals may want to consider a planned gift by remembering the Dental School in their will. Our graduates and others have a great opportunity to volunteer through the Dean's Faculty program.

It is my belief that we will weather this financial storm. Until then, our commitment to giving back to those institutions that have contributed to our educational and professional formation is self-determining. I look forward to working with our alumni to think outside the box in their effort to express compassion for the many lives that are touched by the Dental School. If you are interested in exploring new ways to give, please feel free to contact the Dental School Office of Development and Alumni Relations at 410-706-7148. ■

Gordon Receives Grant

Sharon Gordon, PhD, received a five-year National Institutes of Health (NIH) T32 Training Grant (\$709,247) from the National Institute of Dental and Craniofacial Research (NIDCR) for a combined DDS-master's degree program. The Dual Degree Scholars Program for Clinical Oral Health Research Training will offer dental students training in clinical research or public health by partnering with the master's programs in clinical research and public health (MPH) through the Graduate School and School of Medicine. Elective coursework for the MPH degree also is offered through the University of Maryland, College Park (UMCP) School of Public Health. Dental students participating in the program will graduate with both degrees in five years. The program also offers a unique senior-year clinical experience in the General Practice Simulation and Advanced Education in General Dentistry clinics.

A second one-year award (\$75,000) pairs Gordon with **Tongtong Wu, PhD**, statistical geneticist from the UMCP School of Public Health, to study behavioral and molecular-genetic contributions to human pain experience. Jaime Brahim, DDS, MD, who has joined the Dental School faculty from NIDCR, also serves as a collaborator on the project.

Shirtliff Doubles Up

Mark Shirtliff, PhD, reports news

of two new grants. The first, a College Park-UMB award for one year (\$75,000), will identify novel targets for antimicrobial agents against MRSA and other biofilm-mediated pathogens that will form the basis of future grant applications to NIH, the National Institute of Allergy and Infectious Diseases, the Department of Defense (DOD), and the Department of Homeland Security. The McIver laboratory at College Park will develop and perform the genetic screen system (TraSH), using the biofilm growth systems and animal models provided by the Shirtliff laboratory. A dedicated postdoctoral fellow, **Yoann Le Breton, PhD**, will form the direct bridge between the two groups.

The second grant is for two years from the DOD (\$350,000) and will identify microbial gene products of four species, with upregulated production in biofilms using two-dimensional gel electrophoresis. This proposal also will contribute to a more complete understanding of the bacterial factors involved in microbial biofilm formation and maturation, which will enable one to create novel materials, surfaces, and disinfection strategies that resist or eliminate bacterial fouling and biofilm formation.

Xu Gets Grants

Huakun Xu, PhD, is the principal investigator on two four-year grants. One is from the Maryland Stem Cell Research Commission (\$230,000): "Stem Cell Delivery

via Injectable, Nano-Apatite Scaffolds for Bone Engineering," and one is from NIDCR (\$1.05 million): "Development of High Performance, Caries-Inhibiting Dental Nano-Materials."

Fried Speaks at MODSIM

Jacquelyn Fried, RDH, MS, presented "Simulation: A Pathway to Excellence in Dental Hygiene Education" at the MODSIM world conference last September in Virginia Beach, Va. The event is a unique multidisciplinary international conference and exposition for the exchange of modeling and simulation knowledge, and research and technology across industry, government, and academia.

Ren Aids Pain Seminar

At the spring International Association for Dental Research and American Association for Dental Research meeting in Dallas, **Ke Ren, PhD**, presented "Trigeminal Transition Zone and Deep Orofacial Pain" during the symposia TMJ Pain Mechanisms.

Myslinski Is Honored

At its annual Brain Awareness Week conference, the president of the Society for Neuroscience presented **Norbert Myslinski, PhD**, with a special achievement award for his vital contributions and leadership to neuroscience education. This unique award recognizes Myslinski's work with pre-college students on a local, national, and international level. ■



Mayor's Business Recognition Award: Jillian Easton, BDS, MS, program director of the advanced specialty education program in pediatric dentistry (third from left), with dental students (from left) Jessica Lee, David Richman-Raphael, Jacqueline Sadeghian, Jacob Koch, and Michael Virts (resident)

APS Salutes Dubner

During its 2008 conference, the American Pain Society (APS) presented its Distinguished Service Award for outstanding and dedicated service to the APS to **Ronald Dubner, DDS, PhD**. A past president of APS, Dubner has published more than 250 articles in journals and books and has co-authored one book and co-edited eight others. He is the recipient of numerous awards for research excellence and public health service.

Ro Receives Funding

Jin Ro, PhD, received a \$1.8 million award for "Sex Differences in Peripheral Opioid Receptor Mechanisms," a five-year project

that examines novel mechanisms that may underlie sexual dimorphism in peripheral opioid receptor effects in the context of inflammatory muscle pain conditions.

Mayor Praises Program

The University of Maryland Dental School was recognized at the Mayor's Business Recognition Awards Luncheon for an innovative oral health project. The luncheon, held in December, is an initiative of the Greater Baltimore Committee and the Baltimore Development Corp.

Dental School students and faculty partnered with the Dr. Samuel D. Harris National Museum of Dentistry (NMD)

and the Maryland State Dental Association to successfully develop and implement a unique initiative, Charm City's Give Kids a Smile Day, to promote the oral health of inner-city Baltimore children.

Through this engaging and effective program, students at George Washington Elementary School and children at the St. Jerome's Head Start Center were invited to the NMD in February 2008 to receive free dental screenings, preventive fluoride varnish, and oral health education. Transportation for the children was donated by the Maryland State Dental Association.

The children received Give Kids a Smile packages courtesy



Charles Fine, DDS, chairman of the Maryland section of The Pierre Fauchard Academy, presents a check for \$1,500 to Terri Hines as Dean Stohler looks on.



David Richman-Raphael receives the ADA award from Michael Belenky DDS, MPH, clinical associate professor and director of the Dental School's Global Outreach program.

of the American Dental Association, which included a dental education book, toothbrush, and floss aid. Dental students held the second annual Charm City's Give Kids a Smile Day on Feb. 6.

Established 35 years ago, the award is presented annually to companies demonstrating outstanding community service that has significantly improved Baltimore City. Mayor Sheila Dixon and representatives from the Baltimore Development Corp. and the Greater Baltimore Committee presented the awards at the ceremony, held at the Hyatt Regency.

Hines Wins Fauchard Award

Third-year dental student **Terri Hines** was presented with the Foundation of The Pierre Fauchard Academy Annual Scholarship Award. The \$1,500 scholarship is awarded to a junior who has demonstrated exceptional leadership characteristics and outstanding academic achievement. Its parent organization, The Pierre Fauchard Academy, is an international honorary dental organization established in 1936. Pierre Fauchard was a French dentist often called the father of modern dentistry and credited with raising dentistry to a profession.

ADA Honors Richman-Raphael

Third-year dental student **David Richman-Raphael** was given the American Dental Association (ADA) Certificate of Recognition for meritorious service to the people of Bolivia. Awarded by the ADA's Committee on International Programs and Development, the honor reflects the association's belief "that the personal effort and self-sacrifice of ADA members who serve as volunteers in lesser developed countries to improve the health of their peoples merit professional and public appreciation and recognition." ■

Prepared for the future

Dentistry is changing, but today's students are ready for the task



WRITTEN BY ERIC KATKOW, DDS '70 | ALUMNI ASSOCIATION PRESIDENT

I LOVE BEING A DENTIST AND I SUSPECT that most of you who are reading this feel the same way. It is a great feeling to help people maintain dental health throughout their entire lives.

The education I received during my Dental School years (1966-1970) was the foundation; lifelong learning during these past (almost 40) years was and still is a critical component of success.

Dentistry has changed (as you all know). Access to care is a very serious issue that needs to be solved by us—not by “them.” Diagnosis and treatment of caries has undergone a major paradigm shift (those are the words of Norman Tinanoff, DDS, MS). The amalgam issue is being raised yet again. Choices of materials are wide-ranging. Oral cancer diagnosis is becoming easier due to new techniques and awareness. Bisphenol A is another potential issue in dentistry. Then there is the periodontal disease link between cardiovascular and other diseases.

Will the next generation of dentists be prepared for the new role they must assume?

I believe the answer is yes. The qualifications, scientific curiosity, and many other criteria used by the Dental School's admissions office has resulted in a brilliant class. I've been volunteering as a Dean's Faculty member for many years (if you haven't done so yet I encourage you to do the same—just contact Warren Morganstein, DDS, MPH, at 410-706-7146), and during my interactions with the students I've realized that they have the ability, intelligence, and ethics to enter a great profession.

How can you help? If possible, volunteer at the Dental School. More importantly, please support your alma mater by giving to the Annual Fund. Dean Christian S. Stohler, DMD, DrMedDent, has told me it is easy to design a “cookie-cutter” curriculum; however, he'd like the means to support students with the extra perceived potential to experience education beyond the usual curriculum.

The Alumni Association appreciates your help in making BCDS the best dental school in the country. ■



Sydney Sowell and daughter, Rachel, (white coats) and some of their patients in Ecuador.



Robert Ettleman (seated) with Gulf Coast Dental Outreach co-founder Sol G. Brotman (DDS '80).

1942

Ed Waltman, DDS, reports that he is presently 91, “and still active, but not in our profession.” He retired in 1981 and moved with his wife aboard a 42-foot ketch and sailed to Marathon, in the Florida Keys. He sends his best wishes to the School and writes, “I have very fond memories of my four years there.”

1972

Jared Fine, DDS, MPH, dental health administrator for the Alameda County Department of Public Health in Oakland, Calif., received the Myron Allukian Jr. Lifetime Achievement Award for Outstanding Achievements in Community Dental Programs during the American Association

of Community Dental Program’s Annual Meeting on April 27, 2008, in Miami, Fla. He was honored for exemplary service to communities, distinguished leadership, creativity in promoting essential public health services, achieving results through collaborative efforts with other health professionals, and demonstrating sensitivity to addressing the needs of special populations. Fine’s career has exemplified the public health philosophy of service to communities. For more than 30 years, he has been a leader in dental public health at the local, state, and national levels. In addition to directing the dental public health activities of a large urban county health department, he has been the president of his

local dental society and has served as chair of the board of the Dental Health Foundation and of the Oral Health Section of the American Public Health Association.

1976

Lewis Libby III, DDS, recently retired from the National Naval Medical Center in Bethesda, Md., at the rank of rear admiral. He completed his final tour as deputy medical officer of the Marine Corps in Washington, D.C. Prior tours of duty included associate chief of staff, Bureau of Medicine and Surgery in D.C., and U.S. Pacific Fleet dental officer in Pearl Harbor, Hawaii. Prior commands included his assignment as commanding officer, 4th Dental Battalion, Marine Forces



Allan Schuman (right) with his parents, brother, niece, and President George W. Bush



President Bush admires the portrait of his daughters.

Reserve in Atlanta. Among his responsibilities, Libby supported Navy and Marine Corps-sponsored humanitarian operations worldwide. Presently, he is in private practice in Towson, Md.

1979

Sydney Sowell, DDS, participated with his daughter, Rachel, in a medical mission trip to Ecuador last summer along with two other dentists. His daughter was his assistant, and they visited several villages in the Cotopaxi Province in the Andes Mountains, with the Judith Lombeida Medical Foundation.

1980

Robert Ettleman, DDS, MAGD, is the founder and executive director of Gulf Coast Dental Outreach, Inc., a nonprofit organization providing dental care to low-income adults through a network of more than 40 volunteer dentists. He established this program last year after completing the ADA/Kellogg Executive Management Program. Ettleman received the Florida Dental Association's Humanitarian of the Year Award for 2008.

1985

Allan Schuman, DDS, recently shared photos from his family's 2006 visit to the Oval Office. His

father, David, a 1947 graduate of Johns Hopkins and the Maryland Institute of Art, painted portraits of President George W. Bush and his twin daughters. Our lucky alumnus writes, "It was a real thrill to stand in the Oval Office with the president of the U.S. with pictures of Lincoln and Washington on the wall." ■

IN MEMORIAM

D. Michael Brown, Alumnus and Faculty Member

Members of the Dental School were saddened by the loss of D. Michael Brown, DDS '61, who died of pneumonia in October at the age of 77.

Dr. Brown was born in Canton, Ohio, and raised in Landover Hills, Md. After graduating from St. John's College in Annapolis in 1951, he served for two years in the Army. He had dental practices in Anne Arundel and Prince George's counties for more than 35 years.

In 2003, he was presented with the Faculty Service Award for excellence in teaching and professional demeanor and retired from teaching in 2006. A former president of the Southern Maryland Dental Association, he was also a delegate to the American Dental Association and the state dental association House of Delegates. He was a Fellow of The Pierre Fauchard Academy, the International College of Dentists, and the American College of Dentists. In his spare time, Dr. Brown enjoyed woodworking.

He is survived by his wife of 48 years, the former Maria Piaro; three daughters, Kelly M. Brown of Annapolis, Wendy A. Brown, DDS '93, and Lesly Brown Sajak; a brother, Dr. Joel D. Brown of Honolulu, Hawaii; and two grandchildren. ■

We are also saddened by the loss of the following alumni:

Allen Abrams, DDS '29	Joseph M. McKechnie Jr. DDS '52
Gabriel S. Azzaro, DDS '51	Charles R. Noren, DDS '70
John P. Blevins, DDS '43	James W. Ohearn, DDS '45
Robert O. Carlisle Jr., DDS '54	Jon K. Park, DDS, MS '81
Thomas J. Cavanaugh, DDS '61	William B. Powell, DDS '52
William J. Cirrito, DDS '43	Stuart M. Ratner, DDS '50
Humberto De La Rua, DDS '86	Melvin A. Reff, DDS '76
A. Bernard Eskow, DDS '38	Darren G. Siegall, DDS '80
Kenneth D. Eye, DDS '35	Marvin Skowronek, DDS '43
Edward W. Johnson Jr., DDS '77	James B. Stewart, DDS, '55
August R. Machen, DDS '43	Sidney J. Stillman, DDS '43
Ralph W. McCue, DDS '51	Joseph H. Toropilo, DDS '56

CLASS ACTION NOTICE
KARYN S. BERGMANN, et al.,
Plaintiff Class Representatives, Plaintiff Class Members,

v.

UNIVERSITY SYSTEM OF MARYLAND, et al.
Defendants.

IN THE CIRCUIT COURT OF MARYLAND FOR BALTIMORE CITY

Civil Case No. 24-C-02-005740

AN IMPORTANT NOTICE FROM THE CIRCUIT COURT OF MARYLAND FOR BALTIMORE CITY ABOUT A CLASS ACTION INVOLVING A TUITION REFUND THAT YOU MAY BE ELIGIBLE TO RECEIVE

A class action has been certified by the Circuit Court of Maryland for Baltimore City and steps have been taken by the parties to notify all class members of their rights and involvement in the case. The class action seeks partial tuition refunds for students charged out-of-state tuition after applying for in-state tuition at any one of the following University System of Maryland ("USM") schools: (1) University of Maryland, Baltimore; (2) University of Maryland, Baltimore County; (3) University of Maryland, College Park; (4) University of Maryland, Eastern Shore; (5) University of Maryland, University College; (6) Bowie State University; (7) Coppin State University; (8) Frostburg State University; (9) Salisbury State University; (10) Towson University; and (11) University of Baltimore. Students who qualify as members of the class include those who: (1) petitioned any USM school for re-classification from out-of-state status to in-state status for any semester from the Spring 2001 to the present, and (2) were denied in-state tuition status based upon a failure to overcome the "financial dependence" or "residence at application" presumptions of the relevant USM policies, but otherwise met the requirements of the policy and the school's procedures for obtaining in-state tuition status, including exhaustion of the institution's administrative process. Class members are entitled to have the original decision to charge out-of-state tuition reconsidered by the institution, based upon revised standards for determining how these presumptions should apply (Those standards may be found at www.usmd.edu/regents/bylaws/SectionVIII/VIII270). Depending upon the results of that review, you may be eligible for a refund in the amount of the difference between the out-of-state tuition that you paid and the in-state tuition rate applicable at that time.

If you believe you are a member of the class but have not received a personal notice and wish to be part of the class, you should immediately contact the class plaintiffs' attorney Anthony M. Conti at CONTI FENN & LAWRENCE LLC, 36 South Charles Street, Suite 2501, Baltimore, Maryland 21201, to learn more about your possible rights in this matter, as you may be entitled to a tuition refund.

To learn more about your possible rights and to make a request to be considered as a member of the class, please contact Anthony M. Conti, CONTI FENN & LAWRENCE LLC, by calling (410) 837-6999 or by e-mailing info@lawcfl.com. All e-mails should include the following information: full name, day and evening telephone number(s), current mailing address, name of constituent institution attended, and the years applied for and denied in-state tuition.

Judge M. Brooke Murdock



2008 White Coat Ceremony

On Sept. 8, 2008, the Dental School held its annual White Coat Ceremony, which welcomed the Doctor of Dental Surgery Class of 2012 and the Dental Hygiene Class of 2010. Along with Dean Christian S. Stohler, DMD, DrMedDent, and Associate Dean Carroll-Ann Trotman, BDS, MA, MS, speakers included Alumni Association President Eric Katkow, DDS, and Board of Visitors Chair William Schneider, DDS. The keynote address was delivered by University President David J. Ramsay, DM, DPhil.

The students strode from the Dental School to historic Davidge Hall, assisted by police,

who halted traffic so they could walk without interruption. Chief marshals were Assistant Dean Patricia Meehan, DDS, and dental hygiene director Jacquelyn Fried, RDH, MS. Marshals were faculty members Eric Levine, DDS, Penwadee Limkangwalmongkol, DDS, MS, and Andrea Morgan, DDS, MS. The announcer was Gregory Zeller, DDS, MS. The event was captured in real time using the School's Media-site system, which allowed family and friends to watch the ceremony in its entirety. More than 500 online viewers tuned in to enjoy the event.

The ceremony concluded with a reception in the main atrium of the Dental School.

Alumni Reunion Highlights

Last summer, members of Dental School classes spanning the decades celebrated a wonderful reunion weekend in Baltimore. Events included luncheons, class parties, continuing education courses, and a cruise on the *Bay Lady* in Baltimore's famed Inner Harbor. Members of the 50-year class received certificates, and this year's Distinguished Alumnus was William Magee Jr., DDS, MD '69, who founded Operation Smile, a children's charity treating facial deformities all around the world, with his wife, Kathleen. ■

BALTIMORE COLLEGE OF DENTAL SURGERY, UNIVERSITY OF MARYLAND

Mission The Baltimore College of Dental Surgery, Dental School, University of Maryland, Baltimore, seeks to graduate exceptional oral health care professionals, contribute to the scientific basis of treatments for diseases of the orofacial complex, and deliver comprehensive dental care. These accomplishments will promote, maintain, and improve the overall health of the people within Maryland and have a national and international impact.

Future Vision As we strive to achieve our goals, we envision the future: Reflecting on its heritage, the Baltimore College of Dental Surgery, Dental School, University of Maryland, Baltimore, 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 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.

Dental School Administration

Dean

Christian S. Stohler

Associate Dean

Carroll-Ann Trotman
Academic Affairs

Assistant Deans

David George
Planning and Finance

Patricia Meehan
Admissions and Recruitment

Department Chairs

Patrik Bavoil
Microbial Pathogenesis

Ashraf Fouad
*Endodontics, Prosthodontics, and
Operative Dentistry*

Jacquelyn Fried
Dental Hygiene

Joel Greenspan
Neural and Pain Sciences

Stuart Josell
Orthodontics

Bernard Levy and Renty Franklin
(Interim Co-Chairs, 3/31/09)
Oncology and Diagnostic Sciences

Li Mao
(Chair, 4/1/09)
Oncology and Diagnostic Sciences

Executive Director

Marcelena Holmes
Development and Alumni Relations

Directors

Michael Belenky
*Global Maryland/International
Programs*

Kent Buckingham
Office of Information Technology

Keith Groves
Continuing Education

Gary Hack
Simulation Research

Mark Macek
Instructional Evaluation

Lois Miller
Academic Services

Warren Morganstein
Dean's Faculty



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Ocular Anomalies Associated
with Syndromes of the Head
and Neck

John K. Brooks, DDS

Learning Objectives:

After reading this article, the reader should be able to:

1. Recognize the major criteria of several syndromes of the head and neck
2. Identify some ocular abnormalities associated with the featured syndromes
3. Provide timely referrals of affected patients to appropriate health care personnel
4. Recognize various medical terms of anomalous conditions



John K. Brooks, DDS, is a clinical professor in the Department of Oncology and Diagnostic Sciences at the University of Maryland Dental School and maintains a private general dental practice in Mount Airy, Md. Correspondence may be sent to him in care of this department at 650 W. Baltimore St., Baltimore, Md. 21201-1586 USA. Tel: 301-829-1188; Fax: 410-706-0519; E-mail: oralpath5@comcast.net.

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