Advancing Oral Health. Improving Lives.™

PRESTIGIOUS ACHIEVEMENT

Dr. Robert K. Ernst named

<u>UMB Distinguished</u> Professor.

NEIGHBORHOOD PARTNERSHIP

Access to oral surgery in West Baltimore expands

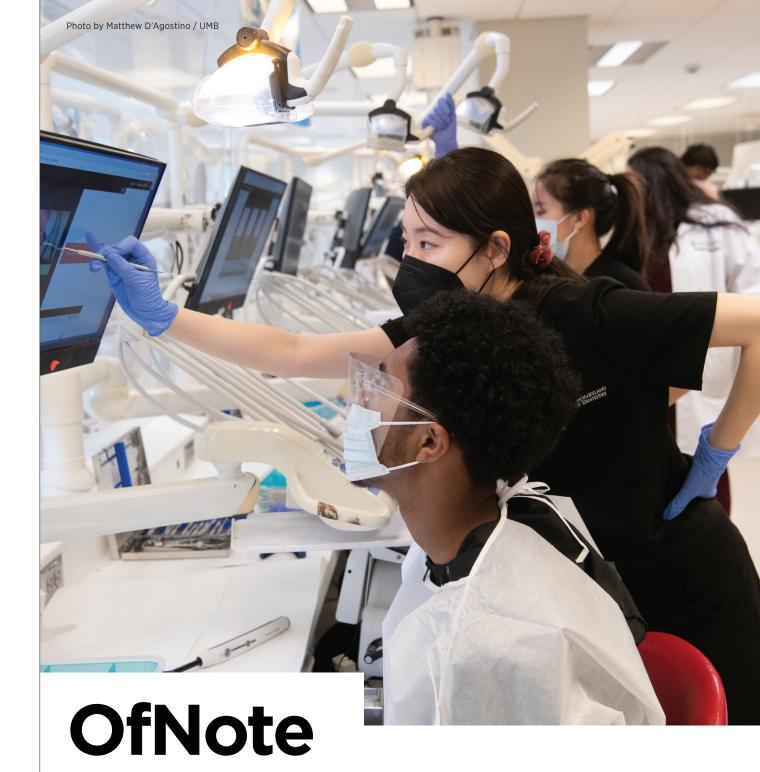
SUCCESSFUL DECADE

UMSOD's SNDA chapter

dental

THE MAGAZINE OF THE UNIVERSITY OF MARYLAND SCHOOL OF DENTISTRY | WINTER 2023

DENTAL EDUCATION ORAL RADIOLOGY **DENTAL BIO-INFORMATICS ORAL PATHOLOGY DEEP DIVE INTO AI UMSOD Launches Division** of Artificial Intelligence Research



Seoyoon Lee, DDS Class 2026, guided Davaughn Murray, a 10th-grade student at West Baltimore's Green Street Academy, through a resin composite restoration — one of several handson activities offered last July during the University of Maryland School of Dentistry's (UMSOD) Planet Smilez Discovering Dentistry Camp.

Part of the University of Maryland, Baltimore CURE Scholars
Program, Planet Smilez is an annual weeklong camp that provides
Baltimore middle and high students opportunities to learn about
careers in science, technology, engineering, and math.
The week's schedule featured lectures, labs, and interactive
projects during which students participated in activities ranging

from posting educational social media content to handling lab equipment.

Nearly 50 youths participated in this year's camp. The students, alongside the UMSOD dental and dental hygiene volunteers, all seemed to enjoy the event.

"It was so much fun engaging with the kids, especially when getting to know more about them outside the context of a dentistry camp," second-year UMSOD dental student Rewa Hazim said. "There was a lot of camaraderie and support to be seen."

- BETHANY PROBST







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16 CULTIVATING FUTURE LEADERS IN BIOMEDICAL RESEARCH

> A new UMSOD summer program aims to inspire youths to pursue careers as scientists.

OPENING DOORS TO ORAL HEALTH CARE

> Thanks in part to the Delta Dental Community Care Foundation, a UMSOD program expands access to dental treatments for qualified older patients.

MESSAGE FROM THE DEAN

ON THE CUSP

- Highest Honor: UMSOD's Robert K. Ernst, PhD, is among eight to receive UMB's most prestigious appointment, Distinguished University Professor.
- **Expanding Oral Surgery** Services: New partnership enables the Department of Oral and Maxillofacial Surgery to provide care in West Baltimore.
- Listen and Learn: Through the NAME Project, students offer oral health services in libraries and listen to patients' stories about barriers to care.

INNOVATION + **DISCOVERY**

New Guidelines for Caries Restoration: An American Dental Association panel led by UMSOD professor Vineet Dhar, BDS, MDS, PhD, recommends a more conservative approach.

LASTING IMPRESSIONS

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- 30 Agent of Change: At the Baltimore College of Dental Surgery 150 years ago, Emilie Foeking became the first woman to graduate from a UMB school.
- 32 All-Alumni Weekend: The 2023 gathering offered plenty of fun.



At the University of Maryland School of Dentistry (UMSOD), expanding access to oral health care is among our top priorities. It is an essential part of improving the quality of life for every person. So, I am pleased that this issue of *Mdental* reports on several programs and initiatives designed to help connect residents of underserved communities with oral health care and education.

One, called the Delta Dental Patient Care Program for Seniors, extends Medicaid coverage for certain dental

services to qualified older adults. Supported in part by a grant from the Delta Dental Community Care Foundation, the program allows the school to provide qualified patients with dentures or partial dentures. Such critical services can be transformative for patients, restoring the ability to chew, speak clearly, and smile.

A new partnership between the Department of Oral and Maxillofacial Surgery (OMFS) and Total Health Care, a federally qualified health center dedicated to caring for the residents of Baltimore's most underserved communities, also will broaden access to critical oral health services. Through it, OMFS faculty will provide oral surgery services at a Total Health Care center in West Baltimore.

You'll find plenty of other exciting news inside this issue, as well. In September, at the UMB Faculty Convocation, Robert K. Ernst, PhD, the Dr. Paul and Mrs. Jean Corcoran Endowed Professor and chair of the Department of Microbial Pathogenesis, was named a University of Maryland, Baltimore (UMB) Distinguished University Professor. The highest appointment bestowed by UMB, the honor recognizes excellence and significant contributions to a nominee's field or profession.

Additionally, for the 10th consecutive year, the school's Student National Dental Association (SNDA) received national recognition for its fundraising, community service, and outreach efforts aimed at encouraging youths from underrepresented populations to pursue careers in the oral health professions. UMSOD's chapter received second place in the 2023 SNDA Chapter of the Year Award competition (large chapter category).

I also am pleased to announce that UMSOD has established a Division of Artificial Intelligence (AI) Research that will be housed within the Department of Oncology and Diagnostic Sciences. It will become a home for a new generation of research and medical applications that have the potential to significantly change our profession. Directed by Ahmed S. Sultan, BDS, PhD, assistant professor and program director, Oral and Maxillofacial Pathology Residency, and co-directed by Jeffery Price, DDS, MS, clinical professor and director, Division of Oral Radiology, this new division will leverage the power of AI to enhance diagnostics and improve patient outcomes.

Our profession's future is almost certain to be different from its present, and *Mdental* is helping explore this next chapter.

Best regards,

Mark A. Reynolds, DDS '86, PhD

Mark Reynolds

Dean and Professor



ON THE COVER

UMSOD launches a new Division of Artificial Intelligence Research.

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OnTheCusp

Canares Spreads Goodwill, Ernst Receives Honor at UMB Faculty Convocation



Photos by Matthew D'Agostino / UMB



1. LEFT TO RIGHT: UMB President Bruce E. Jarrell, Robert K. Ernst, and UMSOD Dean Mark A. Reynolds, DDS '86, PhD, at the Faculty Convocation

2. As a featured speaker at the Faculty Convocation, Glenn Canares discussed teaching with kindness in a TED Talk-type format.

BY HOLLY SELBY

Saying that teaching with kindness lays the groundwork for transformative learning, Glenn Canares, DDS, MSD, clinical assistant professor and director of the University of Maryland School of Dentistry's (UMSOD) Graduate Program in the Division of Pediatric Dentistry, urged his fellow University of Maryland, Baltimore (UMB) faculty members to "Connect first, then teach."

"Practicing kindness and small consistent actions are what sustainable shifts are made of," Canares said as one of three featured faculty speakers at UMB's second annual Faculty Convocation on Sept. 14. "As we connect and create more chains of connections, we change. We change ourselves. We change each other. We change our profession."

The convocation marked the beginning of a new academic year and

celebrated eight new Distinguished University Professors, who received the highest appointment bestowed upon a faculty member of UMB. The title recognizes not only excellence, but also impact on and significant contributions to a nominee's field, knowledge, profession, or practice.

The 2023 honorees included UMSOD's Robert K. Ernst, PhD, the Dr. Paul and Mrs. Jean Corcoran Endowed Professor and Chair, Department of Microbial Pathogenesis, as well as faculty members from the University of Maryland School of Medicine (UMSOM), Francis King Carey School of Law, School of Pharmacy, and School of Social Work.

In addition to his UMSOD appointment, Ernst is an adjunct professor in the Department of Microbiology and Immunology

at UMSOM. His lab has been at the forefront of innovative research studying the molecular basis by which bacteria modify the lipid component of their membrane, specifically lipopolysaccharide, and how these alterations affect normal host innate immune system responses, potentially resulting in septic shock.

Ernst has received more than \$20 million in research funding since arriving at UMSOD in 2008. His work has resulted in more than 190 peer-reviewed manuscripts with 17,000-plus citations. He was named UMB's 2017 Founders Week Researcher of the Year and 2019 Entrepreneur of the Year.

To read about UMB's new Distinguished University Professors, go to *umaryland.edu/president/*distinguished-university-professors. Mcl





Photo by Holly Selby

Members of UMSOD's SNDA 2022-23 executive board

ABOVE: As they prepare for endodontics practicals, third-year students get a little guidance from their upperclass friends.

LEFT: SNDA volunteers help Baltimore communities by picking up trash.

A Notable Chapter

UMSOD's SNDA Receives National Recognition for 10th Consecutive Year

BY HOLLY SELBY

From free oral cancer screenings and trash pickup events to duckpin bowling nights and endodontics prep sessions, the members of the University of Maryland School of Dentistry's (UMSOD) Student National Dental Association (SNDA) engage in an impressive roster of volunteer and social activities aimed at helping each other — and the Baltimore community.

Their efforts have been noticed: UMSOD's chapter received second place in the 2023 SNDA Chapter of the Year Award competition (large chapter category) in recognition of its notable fundraising efforts, community service work, and outreach aimed at encouraging students from underrepresented populations in Baltimore to pursue careers in the oral health professions. The honor marks the 10th consecutive year in which UMSOD's chapter has won first or second place in the national competition.

"When I began my term, we came up with three goals that I think speak to what we're about," said Chimezie Osondu, a fourth-year UMSOD student who served as the 2022-23 SNDA president. "We want to serve as family away from home to dental students, give back to the community through volunteering or mentorship to younger students who want

to be dentists, and build our networks so that we really gain advice and grow as professionals.

Photos courtesy of SNDA

"I really like giving back. I remember how much I appreciated all the mentorship and help I got when I was younger, so I think it is really important to help the community."

Every year, the competition is based upon how successful each chapter is in fundraising, performing community service, and launching new initiatives. Additionally, each is assessed on how it executes three standing national programs: Impressions Day, in which pre-dental undergraduate students visit dental schools to learn about the dental school experience; a holiday canned food or toy drive; and an oral cancer walk.

"Our SNDA members continue to impress me with their ability to plan activities that benefit the community, enhance their academic activities, and support each other socially," said Andrea Morgan, DDS, MS, clinical assistant professor in the Department of Comprehensive Dentistry and director of student advocacy and cultural affairs.

"I am always struck by their energy and commitment as they continue to rise above and get noticed by their peers. I am proud to be the faculty advisor for such an amazing group of students."

Mark A. Reynolds, DDS '86, PhD, dean and professor, noted that many of SNDA's programs bolster UMSOD's efforts to develop culturally competent clinicians, researchers, and educators who are well-equipped to care for a wide range of diverse communities.

"I am impressed by the volunteer work that the SNDA members accomplish while also carrying a demanding roster of coursework," he said. "Their efforts not only offer support for each other but also add greatly to our school community and the Baltimore community at large." Mcl



Photo by Matthew D'Agostino / UMB

Access to Oral Surgery in Baltimore

Administrators and clinicians from UMSOD and Total Health Care Division Health Center gathered to mark the new partnership.

Expanding

The Department of Oral and Maxillofacial Surgery (OMFS) at the University of Maryland School of Dentistry (UMSOD) has established a new partnership with Total Health Care, a federally qualified health center. Dedicated to caring for members of Baltimore's most underserved communities, many of whom fall below the 200 percent poverty line, the center delivers health care services to nearly 30,000 adults and children annually, regardless of their ability to pay.

Through the new partnership that began in April, OMFS faculty will provide oral surgery services at Total Health Care Division Health Center in West Baltimore.

The center serves the Bolton Hill, Druid Heights, Easterwood, Harlem Park, Madison Park, Penn North, Reservoir Hill, Sandtown-Winchester, Upton, Barre Circle, Ridgley's Delight, and Washington Village/Pigtown neighborhoods.

OMFS faculty members Ritika Agrawal, BDS, MDS, FHNSO, clinical instructor; Dwayne E. Everett, DDS, clinical assistant professor; and Pareesa Malik, BDS, DDS, FCPS, FFD RCSI, clinical instructor; will provide oral surgery services in the clinic.

"Oral surgery services have never been provided within the Total Health Care clinics before this partnership with OMFS at the University of Maryland, which enables the department to offer specialized oral surgery to the most underserved in the West Baltimore community," said Gary Warburton, DDS, MD, FACS, chair and clinical professor, OMFS.

Noting that oral health is a critical component of overall health, Mark A. Reynolds, DDS '86, PhD, UMSOD dean and professor, said, "At the School of Dentistry, one of our priorities is to continue to expand access to superlative oral health care to those in need. I am very pleased that this new partnership is enabling the school to expand its reach to community members and provide these services in a setting in or near their neighborhoods." Mcl

- HOLLY SELBY



IN THE FOREFRONT: "Never a Scar. Always a Beauty Mark," an oil painting by Sahar Nesvaderani, DDS' 21, MA, is on display in the new Arch Gallery.

Pedestrians and bicyclists traveling on the University of Maryland, Baltimore (UMB) campus just west of Pearl Street Garage are now greeted by a large display of art created by more than 30 UMB employees, students, alumni, retirees, and local community members. Known as the Arch Gallery, the display was completed in September and complements the nearby Pearl Gallery.

The new outdoor installation was inspired by the third issue of 1807: An Art & Literary Journal, an annual UMB publication that illuminates links between the arts and sciences while engaging members of the University and West Baltimore communities. The journal includes art pieces from a variety of disciplines such as drawing, painting, sculpture, glasswork, photography, and poetry. The gallery is located west of UMB's Pearl Street Garage, adjacent to Arch Street.

- BETHANY PROBST

To watch a video about the Arch Gallery, visit *umaryland.edu/arts/journal/arch-gallery-2023*.

Taking the Pledge

UMSOD Class of 2023 Graduates Promise to Uphold the Highest Standards of Care





Photos by Matthew D'Agostino / UMB

BY LAURA LEE

More than 140 University of Maryland School of Dentistry (UMSOD) Class of 2023 graduates pledged themselves to the service of humanity — their patients, community, and colleagues — during the Honors Convocation ceremony at the Hippodrome Theatre on May 19.

The convocation oath issued by Patricia E. Meehan, DDS, associate dean for academic affairs, serves as a promise that graduates from the world's first dental college will uphold the highest standards of care for their patients and profession.

In remarks to fellow graduates, Wongelawit Deldil Tadesse, DDS '23, president of the Doctor of Dental Surgery Class of 2023, congratulated her peers on their achievements. "You should all be proud of what you've accomplished thus far, and as you take this next step into residency or to work, remember to value community, to choose humility, and to always keep the patients first," she said.

Mark A. Reynolds, DDS '86, PhD, dean and professor, congratulated all of the graduates. "We are confident that through your continued leadership, clinical care, and public service, you will be instrumental in addressing disparities and inequities and advancing discovery-based care in developing medical partnerships that ensure oral health is a part of overall health care."

Board of Visitors Chair Melvin F. Kushner, DDS '66, offered parting wishes to the graduates: "If there was a gift I could give you, it would be that each of you have the happiness and professional satisfaction in your own lives that the school has brought to me and my family," he said.

One day earlier, UMSOD graduates joined their peers at the University of Maryland, Baltimore's (UMB) 2023

1. Bruce E. Jarrell, UMB president, offered welcoming remarks at the 2023 Commencement on May 18.

- 2. After the Honors Convocation on May 19, UMSOD graduates gathered at the School of Dentistry for a festive, outdoor reception and photos, of course.
- **3.** The Military Commissioning Ceremony was held May 19 at the School of Dentistry.

Commencement at Chesapeake Employers Insurance Arena on the campus of the University of Maryland, Baltimore County.

UMB President Bruce E. Jarrell, MD, FACS, presided over the ceremony, which included a video message from Gov. Wes Moore. Honorary degrees were awarded to Shirley Nathan-Pulliam, MAS, BSN, RN, FAAN, and Martha Somerman, DDS, PhD, who were presented by, respectively, Jane M. Kirschling, PhD, RN, FAAN, the now former Bill and Joanne Conway Dean of the University of Maryland School of Nursing, and UMSOD's Reynolds.

Somerman was a UMSOD faculty member from 1984 to 1991 and went on to become dean of the University of Washington School of Dentistry before being named director of the National Institutes of Health's National Institute for Dental and Craniofacial Research. Md

- LOU CORTINA CONTRIBUTED TO THIS ARTICLE



- 1. Bruce E. Jarrell, UMB president, offered welcoming remarks to the incoming first-year dental students as part of UMSOD's Orientation program, held in August.
- 2. Lt. Dennis Smith of the UMB Police Department provided a public safety tour for incoming first-year students during UMSOD's Orientation program.
- 3. One of the best parts of the Orientation program is getting acquainted with fellow students.





'Your Success Is Our No. 1 Priority'

UMSOD Welcomes First-Year Class at Orientation

BY HOLLY SELBY

Mark A. Reynolds, DDS '86, PhD, dean and professor of the University of Maryland School of Dentistry (UMSOD), welcomed the incoming members of the school's Class of 2027 in August, saying he "always looks forward to the promise and excitement of a new academic year."

"Each of you has been selected to attend our school not only because of your strong track record of achievement, but — equally important — your desire to make a difference in the lives of others," Reynolds said. "And from start to finish, your success is our No. 1 priority."

His remarks were made Aug. 14 as part of UMSOD's Orientation, which is held annually to introduce members of the first-year dental and dental hygiene classes to the school.

Bruce E. Jarrell, MD, FACS, president of the University of Maryland, Baltimore, was among those on hand to greet the newcomers.

"One of the hopes I have for you students and eventual graduates of

this program is that you will gain additional skills — not just the dental skills but also the great interpersonal skills" that are integral to providing care to all members of the community, he said.

The students also heard from Joanne Block Rief, DDS '86, president of the Alumni Association Board of Directors. and administrators from the offices of Development and Alumni Relations, Student Affairs, Academic Affairs, and Equity, Diversity, and Inclusion.

The eight incoming dental hygiene and three BS/MS Dual Degree Clinical Dental Hygiene Leader Track students met with many of the same speakers, as well as two Dental Hygiene Program leaders: Suzanne Burgee, RDH, MSDH, director and clinical instructor, and Chathurika Weerasinghe, RDH, MSDH, clinical assistant professor, director of admissions, and Junior Clinic coordinator. Md

Meet the Class of 2027

130 students entered UMSOD's first-year class

1 in 20 applicants is accepted on average

17 states are represented

50 percent of students come from states other than Maryland

61 percent are female

28 percent are underrepresented minorities

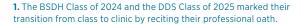
7 entering students hold Master of Science Degrees

holds a doctorate

Transition to Clinician

At White Coat Ceremony, Students Recite Oath, Take Next Steps





- 2. Crossing West Baltimore Street, UMSOD students walk to their White Coat Ceremony, which was held Sept. 18, 2023, at MSTF Leadership Hall.
- **3.** Members of the BSDH Class of 2024 and the DDS Class of 2025





Photos by Matthew D'Agostino / UMB

BY HOLLY SELBY

I pledge myself to the service of humanity — my patients, my community, and my colleagues.

With these words, the members of the Bachelor of Science Dental Hygiene Class of 2024 and the Doctor of Dental Surgery Class of 2025 solemnly recited their professional oath at the University of Maryland School of Dentistry's (UMSOD) White Coat Ceremony and promised to uphold the highest standards as oral health practitioners.

The ceremony, which was held Sept. 18 at MSTF Leadership Hall, celebrates an important milestone as the students transition from classroom to clinic.

"Today is a very special day for our students, their families and friends, and, indeed, for the faculty and staff who stand behind our students, every day, every step of the way," said Mark A. Reynolds, DDS '86, PhD, UMSOD dean and professor.

"This ceremony is arguably the most iconic rite of passage for students in all health care professions and symbolizes the scientific rigor that will inform their clinical practice and the compassion with which they will serve."

As part of the ceremony, the students received a University of Maryland, Baltimore lapel pin

and a handwritten note. Called "Words of Wisdom," each note was crafted by a member of the UMSOD community and carried a message of advice, encouragement, or congratulation. Additionally, for the fourth consecutive year, alumni and UMSOD supporters had the opportunity to sponsor a white coat; this year, 162 individuals offered gifts on behalf of the White Coat Ceremony.

Other faculty and guest speakers included Chris Choi, DMD, MS, FACS, clinical assistant professor and co-director of predoctoral prosthodontics, Department of Advanced Oral Sciences and Therapeutics; Ekpa Eyoma, DDS '18, MPH, clinical instructor, Division of Diagnostic Sciences; and Joanne Block Rief, DDS '86, president of the Alumni Association Board of Directors.

Urging the students to ask questions of their professors, learn from their peers, and seek the counsel of mentors during their dental school years, Block Rief said that by accepting their white coats, "you are pledging yourself to a process of lifelong learning."

Noting that the oral health professions are never static, she added: "There is no telling what the next big thing in dentistry will be, and you will need to be ready and willing to learn and incorporate it." Mcl

UMSOD's Myslinski Awarded Wilson H. Elkins Professorship from University System of Maryland



Photo by Matthew D'Agostino / UMB

Norbert Myslinski, PhD, associate professor in the Department of Neural and Pain Sciences at the University of Maryland School of Dentistry (UMSOD), received a 2023-24 University System of Maryland (USM) Wilson H. Elkins Professorship in the amount of \$60,000.

The professorships honor the late Wilson H. Elkins, president of the University of Maryland flagship campus from 1954 to 1978, and are intended to support promising faculty projects in teaching, innovation, or public service.

Myslinski has pioneered several educational programs, including the International Brain Bee, an annual competition designed to inspire a love of neuroscience

in youths that now has chapters in more than 50 countries. Most recently, he and Hening Ren, PhD, assistant professor in UMSOD's Department of Oncology and Diagnostic Sciences, launched the Maryland Program in Dental Research Experience, a summer camp that offers handson research experience to high school and undergraduate students and teachers. (See story on page 16.)

Myslinski plans to expand access to this program to youths who have disorders such as autism, blindness, deafness, and dyslexia. Additionally, he has proposed launching a monthly speaker series featuring celebrity guests and focusing on neurological and psychological disorders or conditions such as memory, pain, and emotion.

"As an international neuroscience educator, I work with more than 100 countries to inspire young men and women to seek careers in neuroscience where they can treat and find cures for brain disorders. The Elkins Professorship will enable Maryland students with brain disorders to benefit from these educational programs," Myslinski said.

In 2016, Myslinski was named Scientific Educator of the Year by the Society of Neuroscience. In 2000, he received the University of Maryland, Baltimore's Founders Week award for public service. And in 2020, he was a recipient of the USM Board of Regents Faculty Award for Excellence in Public Service. Md

- HOLLY SELBY

Seeking New Ways to Prevent or Correct Cleft Palate



Jeremie Oliver Piña, a student in the DDS Class of 2026 at the University of Maryland School of Dentistry, was the first author of an article published in the Nature Communications journal that describes his research into how bone forms in the developing palate,

aimed at identifying new ways to prevent or correct birth defects such as cleft palate.

The article resulted from work conducted as a Class of 2023 PhD candidate in biomedical engineering at the University of Utah. As part of his dissertation, Piña is conducting research at the National Institutes of Health in the laboratory of Rena D'Souza, DDS, MS, PhD, director, National Institute of Dental and Craniofacial Research, and head, Section on Craniofacial Genetic Disorders, National Institute of Child Health and Human Development.

Piña and his lab mates identified several new genes that might play

an important role in the development of the palate. Using a mouse model, they studied a gene known to help orchestrate palate development in depth to better understand its function in palatal bone formation.

They now are expanding upon this newfound knowledge in human genetic datasets to understand how disruptions in these same genes may lead to craniofacial birth anomalies in humans. Ultimately, they hope to identify new diagnostic and therapeutic targets for preventing or correcting birth defects such as cleft palate and tooth agenesis. Md

- HOLLY SELBY

Accolades

In celebration of student and staff accomplishments



Courtesy of Oksana Mishler

LEFT TO RIGHT: Sheryl Syme, Tymarin Ward, and Oksana Mishler attended the American Dental Hygienists' Association 2023 Annual Conference in Chicago.

Tymarin Ward, RDH, BS '23, MS '23, is the 2023 recipient of the Philips Oral Healthcare Linda E. DeVore Professional Integrity Award, which is presented by the Division of Dental Hygiene at the University of Maryland School of Dentistry (UMSOD).

The honor recognizes a UMSOD dental hygiene student who exemplifies the type of dignity, civility, honesty, integrity, intellectual curiosity, and responsibility that the late Linda DeVore, RDH, BS '76, MA, displayed throughout her professional career as a dental hygienist, faculty member, and chair of the Department of Dental Hygiene.

Ward, who is a graduate of UMSOD's BS/MS Dual Degree Clinical Dental Hygiene Leader Track (CDHL) program, was selected to represent CDHL at the American Dental Hygienists' Association (ADHA) 2023 Annual Conference, which was held in Chicago in July. His presentation "Dental Advocacy for Individuals with Intellectual Disabilities" was part of the Graduate Student Clinician's Research Program sponsored by Dentsply Sirona at the 100th anniversary celebration of ADHA.

Ward completed his research under the guidance of his mentor, Sheryl Syme, RDH, MS, FADHA, associate professor in the Division of Periodontics, Department of Advanced Oral Sciences and Therapeutics (AOST). Syme and fellow AOST faculty member Oksana Mishler, RDH, DHSc, attended the ADHA event with Ward. Mcl

- BETHANY PROBST



◀ William Hoffman, MAS, research administrator, Office of Administration and Finance, received a three-year renewal of his designation as a member of the Society of Research Administrators International Distinguished Faculty.



■ Kenneth Leong, DDS '23, received the 2023 American College of Dentists Outstanding Student Leadership Award, which recognizes student participation in leadership roles at the university or community level.



■ Suephie Nazemian, fourth-year dental student, was the lead author of "What Every Dentist Needs to Know About the Use of Artificial Intelligence in Dentistry," which was published in General Dentistry. The co-authors included fourth-year dental students

Steven Boggs, Esther Jung, Heba Abu Shakra, and Yasmin Lotfalikhan-Zand; third-year dental student Elvia Jimenez Ciriaco; and UMSOD faculty members Jeffery B. Price, DDS, MS, and Nasir Bashirelahi, PhD.



■ Shereece F. Singleton, MS, office manager, Department of Microbial Pathogenesis, was a finalist in the Loyalty category of the 2023 Philadelphia Admin Awards, which recognize the achievements, dedication, and important roles played by administrative professionals.



Photo by Matthew D'Agostino / UMB

UMSOD Student Recognized for Outstanding Leadership

Brandon Shim, a student in the Class of 2024 at the University of Maryland School of Dentistry (UMSOD), was among the recipients of a 2023 Oral Health Foundation Student Scholarship.

The scholarships are presented to third-year students at dental schools in the United States, Canada, and Australia who exhibit the potential to become outstanding leaders in the profession. The foundation is part of the Pierre Fauchard Academy, a nonprofit focused on the global advancement of oral health care.

Now in his fourth year at UMSOD, Shim hopes the recognition will galvanize him to continue to contribute to the dental profession and further promote oral health within the community.

"This award not only motivates me to continue striving for excellence in dentistry, but it also reinforces my commitment to providing the best care to my patients and continuing my journey as an oral health leader," he said.

Shim also was honored as a 2023 District Delegate of the Year by the American Student Dental Association (ASDA) last spring and serves as chair of ASDA's Council on Professional Issues.

He has held multiple other leadership roles, including president of the school's ASDA chapter in 2022 and president of the Korean American Student Dental Association, and is a member of the Gorgas Odontological Honorary and Gamma Pi Delta Prosthodontic Honor societies. Md

- BETHANY PROBST

UMSOD Volunteers Make Smiles Brighter at Special Olympics Summer Games



Photo by Kari Syme
Volunteer Karen Abboud, DDS Class of 2024, applies fluoride
varnish to the teeth of an athlete at the Special Olympics Maryland

University of Maryland School of Dentistry (UMSOD) students offered free oral health screenings, dental education, and hygiene materials to athletes at the Special Olympics Maryland Summer Games on June 24 at Towson University

Known as the Special Olympics Special Smiles Program (SOSS), the event gives athletes with intellectual disabilities opportunities to take charge of their oral health. The screenings, performed by UMSOD students, are designed to increase awareness about the importance of oral health for the athletes and their families and coaches.

The event is one of eight screenings offered by Healthy Athletes, a program that offers free physical exams in a welcoming environment.

In addition to screenings, the dental and dental hygiene students applied fluoride, fitted custom mouthguards, and taught athletes proper brushing and flossing techniques. Of the 95 athletes served, 37 were provided with custom-fit, protective athletic mouth guards, and 82 received fluoride varnish applications.

Over two decades ago, Mark Wagner, DMD, professor emeritus, who served as the first clinical director for SOSS Maryland, led the first group of UMSOD volunteers at the Special Olympics. Wagner, who is a member of UMSOD's Dean's Faculty, continues to volunteer and support the event.

Sheryl Syme, RDH, MS, FADHA, associate professor and director of dental hygiene programs, UMSOD, and state clinical director, SOSS Maryland, said the camaraderie and teamwork of the volunteers had never been better. She also expressed gratitude for the efforts of Sydnee Chavis, DMD, MS, FSCDA, clinical assistant professor, Department of Oral Surgery, UMSOD, and co-clinical director, Maryland Special Smiles.

"The athletes enjoy interacting with the students and dental professionals, and that helps promote inclusive oral health for individuals with disabilities," Syme said. Md

- BETHANY PROBST

ByTheNumbers

Alumni play a vital role in the life of the University of Maryland School of Dentistry. They're the people who know the institution best and are among its greatest supporters. As superlative practitioners, they're role models for the coming generations of oral health leaders — and exemplars of the school's finest qualities.



Here is a numerical snapshot of UMSOD's alumni:

Number of living alumni*

Number of alumni living in Maryland

8,612

3,699

Average age

Number of alumni living outside the United States

121

Number of alumni by specialty

148 Periodontics

190 Pediatric Dentistry

154 Orthodontics

177 Endodontics

116 Prosthodontics

Advanced Education General Dentistry

178 **Oral and Maxillofacial Surgery**

250

Number of alumni who volunteer as Dean's Faculty members

*Numbers are based upon data that UMSOD receives from its alumni. To update your information, write dentalalumni@umaryland.edu.

NAME of the Game: Improving Access to Oral Health Care



As part of the NAME Project, UMSOD students offered oral health screenings at Long Branch Library in Silver Spring, Md., and listened to community residents' experiences in accessing oral health care.

Against a backdrop of novels, biographies, and children's picture books, University of Maryland School of Dentistry (UMSOD) faculty and students listened to stories and offered free oral health screenings and education at two public libraries in Maryland last spring.

Their goal was to use public libraries as welcoming spaces in which to share information about healthy dental habits and learn about the experiences of community members who struggle to gain access to good oral health care.

The events drew 343 participants to the libraries in Hyattsville and Silver Spring. Part of the Narrative Dentistry

and Medical Education (NAME) Project, they were funded by a \$281,506 grant from the National Institute of Dental and Craniofacial Research (NIDCR).

"This project enables us to gain direct insight from underserved populations," said Sheryl Syme, RDH, MS, FADHA, associate professor, Department of Advanced Oral Sciences and Therapeutics, UMSOD, and one of seven co-principal investigators on the project. The others include professors of English, librarians, and dental school faculty members from the University of Maryland, College Park (UMCP) and the Universities at Shady Grove, as well as universities and dental schools in California, Indiana,

"Learning directly from those who struggle to gain access to oral health care will allow us to create solutions that address their specific needs."

The project was suggested by members of UMCP's Department of English after Deamonte Driver, a 12-yearold from Prince George's County, died when his untreated toothache led to a brain infection. The 2007 tragedy generated national attention about the need for equitable access to oral health care.

As part of the NIDCR grant, Syme received a \$23,948 sub-award to assess the effectiveness of public libraries as alternative spaces for screenings and education. The data gathered about patient experiences will be analyzed, and narrative workshops will be held for dental students.

"We really want to focus on narrative dentistry," Syme said. "We want to talk with dental students about stories patients have shared with them about the difficulties of discrimination or accessing oral health care." Md

- BETHANY PROBST

Building a Sense of Belonging



Rev. Dr. Jamie Washington, PhD, MDiv, MSEd, led a discussion on Aug. 7 designed to enhance a sense of belonging at the University of Maryland School of Dentistry (UMSOD). The president and co-founder of the Washington Consulting Group and

a founder of the Social Justice Training Institute, Washington also was the keynote speaker at UMSOD's Faculty Staff Retreat in December 2022. During the full-day, interactive program, community members were invited to pause and reground themselves in UMSOD's core values.

In his most recent presentation, titled "A More Inclusive UMSOD," Washington offered community members a chance to share experiences and discuss ways of enhancing each individual's sense of belonging.

Washington holds Master of Science degrees from Indiana University Bloomington in counseling and higher education administration; a doctorate in college student development from the

University of Maryland, College Park; and a Master of Divinity from Howard University School of Divinity. He has received multiple honors including the University of Maryland, Baltimore County's Legends of Excellence Award for his involvement in helping the lives of Black and Latino faculty, staff, and students; an honorary Doctor of Business **Administration from Shepherd University** in West Virginia; and the 2020 Annuit Coeptis Senior Leader Award from the American College Personnel Association, which recognizes extensive and sustained contributions to the field of student affairs, Md

- BETHANY PROBST

Innovation +Discovery



Thinking Beyond the Patient in the Chair

UMSOD's Weatherspoon Focuses on Public Health Research to Address Disparities in Oral Care

After graduating from the University of Maryland School of Dentistry (UMSOD), Darien Weatherspoon, DDS '10, MPH, assistant professor, Department of Dental Public Health, completed an Advanced Education in General Dentistry residency and received his Master of Public Health degree in epidemiology from the University of Michigan. He completed a second residency in dental public health at the National Institutes of Health's (NIH) National Institute of Dental and Craniofacial Research (NIDCR) and is a current diplomate of the American Board of Dental Public Health. In 2021, he received UMSOD's Rising Dental Health Leader Alumni Award.

Mdental asked Weatherspoon five questions to learn more about his work.

You received a two-year, \$424,875 R21 grant from the NIH's National Institute on Minority Health and Health Disparities. What project does it fund?

This grant will allow us to analyze claims data and data on social determinants of health (SDOH) to assess if there is equity in access to and utilization of dental services through Medicare Advantage for all groups, or whether SDOH serve as a barrier to access for traditionally underserved groups. By identifying SDOH that drive disparities, we can develop targeted interventions to address these barriers to care.

What are social determinants that might influence access to care?

The number of dental providers, community resources and characteristics, and socioeconomic characteristics in each region can all influence a person's ability to access oral health care.

You began your professional career working at an accounting firm. What inspired you to pursue a career in oral health?

I was drawn to dentistry because of the relationship dentists have with their patients and their ability to improve people's health in a tangible way. As a dental student living in Baltimore, I saw there was much need for oral health care. People at health fairs constantly mentioned that they hadn't been to the dentist in years. So that had me thinking beyond the single patient in the dental chair — and more at a population or community level.

What lessons did you learn from your residency at NIDCR?

I learned how to conduct public health research to answer important research questions aimed at improving the oral health of communities and populations. I also received training in different aspects of public health dentistry, including the importance of prevention with community water fluoridation, sealant programs, and oral health education.

How do you envision future projects?

The grant itself is going to be a foundation for future research. We know that the need for oral health doesn't stop as we age. As we get older, maintaining oral health is still important, and older adults, who are a growing segment of the population, are maintaining more of their natural teeth over time. I also am conducting clinical research to better understand oral cancer disparities among African American men, as well as research to understand how allostatic load (chronic stress) impacts the oral health of individuals living with HIV. Mcl

- INTERVIEW BY BETHANY PROBST





An expert panel led by Vineet Dhar released new guidelines for caries treatment.

ADA Releases New Guidelines on Caries Restorations

Panel Led by UMSOD's Dhar Advocates for More Conservative Approaches

BY MICAH KLEID

Led by Vineet Dhar, BDS, MDS, PhD, of the University of Maryland School of Dentistry (UMSOD), an expert panel recently released new guidelines for restorative treatments that suggest more conservative approaches to removing carious tissue may decrease adverse effects.

The panelists, who are members of the American Dental Association's Council on Scientific Affairs and Science & Research Institute, analyzed literature and investigated carious tissue and caries restoration over three years. Their findings were published in July in the Journal of the American Dental Association.

"We have realized that the management of tooth decay, which begins with prevention, includes two other distinct parts: First, we have to manage the disease process; second, we have to treat or manage the decayed tooth, the caries lesion, or cavity," said Dhar, clinical professor, assistant dean of postgraduate and professional studies in dentistry, and chair of UMSOD's Department of Orthodontics and Pediatric Dentistry.

Traditionally, most dentists have been trained to remove caries lesions completely. But at UMSOD, said Mary Anne Melo, DDS, MS, PhD, clinical professor and chair of the Department of Comprehensive Dentistry, "We emphasize evidence-based dentistry aimed at less-invasive carious tissue removal and highlight the effectiveness

of various direct restorative materials in the management of deep carious lesions on both primary and permanent teeth."

The new guidelines indicate that "you no longer have to remove all the tooth decay, you just have to remove enough and put in the right restoration materials on top of it," Dhar explained.

When managing a cavitated lesion of moderate or advanced depth, trying to remove all the decay can expose nerves or pulp, which can lead to a need for pulp therapy or a root canal, Dhar noted. The research shows a more conservative caries removal strategy can reduce that risk.

"We know that we need to begin with prevention," Dhar said. "But now research shows that the initial decay can often be managed by nonrestorative methods — not necessarily taking a drill and filling the tooth but using other techniques to arrest the existing decay. And, for cavitated lesions, when indicated, a conservative removal of tooth decay followed by use of appropriate direct filling material is recommended."

To create the new guidelines, a systematic review was conducted following a structure known as the GRADE Framework for formulating recommendations. Before making its recommendations, the panel analyzed data and considered treatment outcomes as well as patient preferences, resources, costs, and feasibility. Md

- HOLLY SELBY CONTRIBUTED TO THIS ARTICLE

Building a Pathway to Discovery

UMSOD SUMMER PROGRAMS AIM TO INSPIRE STUDENTS TO BE SCIENTISTS

BY HOLLY SELBY



Photo by Holly Selby

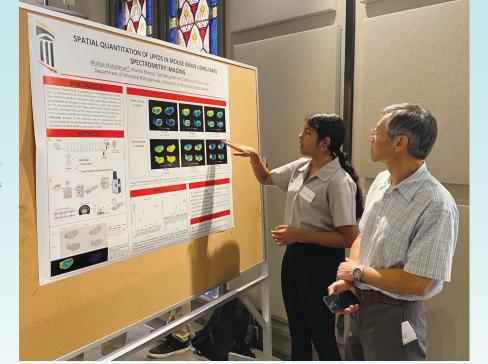
Tamunobelema Olungwe, a student at the Western School of Technology and Environmental Science and member of the D-REX program, presents her research findings at UMSOD's annual Summer Research Day on Aug. 4.





Photo by Matthew D'Agostino / UMB

Eddie Zhang, a Johns Hopkins University student, receives first prize in the inaugural D-REX program science poster competition.



Akshya Mahadevan, a Richard Montgomery High School student, discusses her research with Hening Ren, assistant professor and co-director of the D-REX program, during UMSOD's Student Research Day.

Photo by Holly Selby

"Developing new pathways for students who are interested in the oral health professions is a priority for the School of Dentistry."

- MARK A. REYNOLDS, UMSOD DEAN AND PROFESSOR

eventeen-year-old Akshaya Mahadevan spent last summer at the University of Maryland School of Dentistry (UMSOD) analyzing levels of lipids in the brains of mouse models of Alzheimer's disease. The goal was to assess the effectiveness of a specific lipid mix when used in mass spectrometry imaging aimed at further understanding the disease.

"All my life, I've been super, super interested in biology and experimentation. So, it was a really amazing opportunity to be able to work in a lab, get to meet people, and see what scientists really do," the Richard Montgomery High School student said. "It's pretty cool."

Mahadevan, who was working under the mentorship of Alison Scott, PhD, assistant professor in UMSOD's Department of Microbial Pathogenesis, was one of 16 participants in the Maryland Program in Dental Research Experience (D-REX), a new UMSOD initiative aimed at developing future researchers and educators with a passion for and knowledge of dental and oral health research and care. Launched last summer, the program is funded by a five-year, \$675,000 grant from the National Institute of Dental and Craniofacial Research (NIDCR).

Creating an ever-widening network of youths and educators — particularly those from underrepresented populations — who are excited about research in the dental and craniofacial field is critical to future innovations in the oral health field, said Mark A. Reynolds, DDS '86, PhD, UMSOD dean and professor.

"Developing new pathways for students who are interested in the oral health professions is a priority for the School of Dentistry."

Noting that D-REX is the newest in a roster of UMSOD initiatives aimed at inspiring youths to pursue careers in dental and oral health research, Reynolds added, "This exciting new summer opportunity will help students gain knowledge and skills that will enhance their success in classrooms, colleges, and beyond—and potentially inspire them to pursue careers in oral health."

INSPIRATION AND EXCITEMENT

Co-directed by Norbert Myslinski, PhD, associate professor, Department of Neural and Pain Sciences (NPS), and Hening Ren, PhD, assistant professor, Department of Oncology and Diagnostic Sciences (ODS), the D-REX program offers training in lab techniques and relevant seminars to high school and



Photo by Matthew D'Agostino / UMB "By providing these student

experiences, we aim to develop future leaders in research who will find a cure for orofacial disorders and make other

- NORBERT MYSLINSKI, CO-DIRECTOR OF THE D-REX PROGRAM

biomedical innovations."

LEFT: Man-Kyo Chung, professor and assistant dean of research and graduate studies at UMSOD; Jair Sinisterra, third-year dental student and first-place winner of UMSOD's Summer Research Program science poster competition; and Janice Lee of the National Institute of Dental and Craniofacial Research

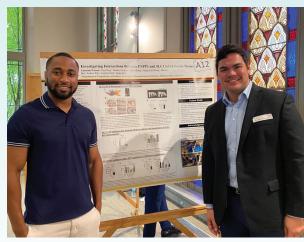


Photo by Holly Selby

college students, particularly those from underrepresented populations. Teachers who come from or teach in schools serving underrepresented populations also are welcomed.

"By providing these student experiences, we aim to develop future leaders in research who will find a cure for orofacial disorders and make other biomedical innovations," Myslinski said.

"Our purpose is to inspire the students and give them a taste of what the life is like if they go into dental research — and how exciting it can be," Ren said. "We want them to learn how to generate a hypothesis, formulate the big questions, and design an experiment."

The inaugural D-REX cohort included undergraduates from Johns Hopkins University, Morgan State University, and the University of Maryland, College Park; high school students from Western School of Technology and Environmental Science, Catonsville, Md; Parkville (Md.) High and Gilman School, Baltimore; and a teacher from Northview Elementary in Bowie, Md.

In addition to lab work, the students attended weekly lectures on biomedical research methodology and how to translate science into useful products. There also were weekly discussions about equity, diversity, and inclusion in scientific professions, artificial intelligence, or career opportunities in dentistry and dental hygiene. Field trips included visits to UMSOD's dental clinics, the Dr. Samuel D. Harris National Museum of Dentistry, and the R Adams Cowley Shock Trauma Center at the University of Maryland Medical Center.

Perhaps best of all, participants were paired with faculty members who acted as mentors and provided guidance for their lab work.

"It's an important thing to tell young folks, 'You belong in STEM, and whether you're different or come from a different background, you belong here," " said Scott, who in addition to Mahadevan mentored Adrian Ibanez, a Johns Hopkins senior who hopes to pursue dentistry and research.

"What I wish to pass on is enthusiasm," Scott added. "Some experiments are duds, and some are groundbreaking. What I hope to impart is that it's all exciting. The thinking and the doing and pulling together your conclusions? That's the exciting part."

For Ibanez, who focused on the molecular effects of pathogen inactivation methods such as heat and gamma radiation and what their impact is on samples, the summer research experience bolstered an ambition to attend dental school and a passion for discovery.

"My biggest takeaway is that there's always work to be done in science. There are always gaps to be filled in our knowledge, things to learn, and ways to contribute," he said. "I think [the program] has reinforced my resolve because there's so much work to be done, there's so much left to understand."

HANDS-ON RESEARCH

Throughout the summer, the D-REX program paralleled with UMSOD's Dental Student Summer Research Training Program, which for years has provided dental or matriculating dental students opportunities to gain direct, hands-on biomedical research experience.

In this program, the more experienced students immerse themselves in laboratory culture and receive formal training in statistical analysis, scientific writing, and ethics in science.



Photo by Matthew D'Agostino / UMB

FAR LEFT: Emmanuel Engermann, third-year dental student, and Alan Gorny, first-year dental student, are participants in the Summer Research Program.

LEFT: The inaugural cohort of UMSOD's D-REX program gathers for a photo.



They also attend a seminar series and are paired with a faculty mentor.

"I've had the opportunity to host numerous students from the program in my lab and have always been impressed with their enthusiasm, dedication, and level of research they accomplish in such a short time," said Mary Ann Rizk, PhD, professor, Department of Oncology and Diagnostic Sciences, and director of the mentorship program.

"We aim to offer these experiences early in the students' educational journeys to capture their interest in research—in hopes that it lasts throughout their careers."

The programs dovetailed nicely. Participants from each worked alongside each other in labs, bouncing ideas off one another and becoming acquainted.

"By experiencing research along with dental students, the D-REX trainees had the chance to get to know the more experienced, rising, young scientists and, we predict, become further motivated to pursue oral health-related careers," said Man-Kyo Chung, DMD, PhD, professor, NPS, and UMSOD's assistant dean of research and graduate studies.

The culmination of both programs came Aug. 4 at UMSOD's annual Student Research Day, during which participants showcased their scholarly research in a science poster competition.

Against the backdrop of Westminster Hall's stained-glass windows, all participants presented their findings and answered questions before a panel of judges drawn from UMSOD's faculty. Janice Lee. clinical director and chief. Craniofacial Anomalies

and Regeneration Section, NIDCR, presented the keynote speech, and 17 NIDCR fellows attended

In the end, third-year dental student Jair Sinisterra received first place in the Summer Research Training Program. Mentored by Vivek Thumbigere-Math, BDS, PhD, assistant professor, Division of Periodontics, Sinisterra focused on periodontitis and emerging evidence that suggests an association with inflammatory bowel disease. Second through fourth place went to second-year dental students Carlos Curay, Youstina Hanna, and Aza Shiao, respectively.

And the winner of the inaugural D-REX program competition? Eddie Zhang, a Johns Hopkins sophomore who is majoring in public health and minoring in psychology.

Mentored by Emily Chu, DDS, PhD, assistant professor, Division of Operative Dentistry, Zhang investigated ectonucleotide pyrophosphatase/phosphodiesterase inhibition and its effects on mineralization in a periodontally compromised mouse model. The goal was discovering findings that contribute to treatments for periodontal disease.

"The best part of my experience is getting to learn a lot of useful information under my mentor," he said. "Also, I loved all of my lab members. They've truly made this experience so much better."

To watch a video about UMSOD's D-REX program, visit dental.umaryland.edu/drex. Mc



Golden Opportunity

New UMSOD Program Aims to Improve Oral Health for Older Patients on Medicaid



CENTER RIGHT: Overseen by Robert Windsor, director of clinical operations in UMSOD's Division of General Dentistry, a new UMSOD program will enable dental students, guided by faculty members, to provide dentures to qualified Marylanders age 60 and over who receive Medicaid.

"There is a critical need for quality oral health care for the elderly, and this grant really begins to fill a gap in their ability to get that care."

- ROBERT WINDSOR, DIRECTOR OF CLINICAL OPERATIONS IN UMSOD'S DIVISION OF GENERAL **DENTISTRY**

BY HOLLY SELBY

he University of Maryland School of Dentistry (UMSOD) has launched a program designed to enhance oral health care among Marylanders age 60 and over who receive Medicaid. The initiative also will enable the school to gather information about patient experiences to develop clinical programs designed better to meet the needs of an aging population.

The Delta Dental Patient Care Program for Seniors initiative is supported in part by a \$150,000 grant from the Delta Dental Community Care Foundation and builds upon a state law that extended Medicaid coverage for certain dental services for qualified adults. Under the new law, enacted Jan. 1, 2023, and known as the Maryland Healthy Smiles Dental Program, diagnostic, preventive, restorative, and periodontal services are covered, but removable prosthodontic care is not. The law eliminates insurance premiums, deductibles, and co-pays for the covered services.

"There is a critical need for quality oral health care for the elderly, and this grant really begins to fill a gap in their ability to get that care," said Robert Windsor, DDS, FICD, director of clinical operations in UMSOD's Division of General Dentistry and the principal investigator of the grant.

As the only school of dentistry in Maryland, UMSOD plays a leading role in shaping the direction of clinical care in oral health — and clinical research is vital to that effort, said Mark A. Reynolds, DDS '86, PhD, dean and professor.

"I am pleased that with this grant from the Delta Dental Community Care Foundation, the school will not only be able to provide much-needed care to our qualified patients, but also gather data that will be invaluable as we work to ensure the best, state-of-the-art oral health care for older Marylanders," he said.

Under the program, patients who qualify will be able to receive essential prosthetic treatment such as dentures and partial dentures that will help restore their ability to chew, speak clearly, and smile, which are all critical to overall health, self-esteem, and quality of life. Dental students, who have received training about the new program, will refer potential patients to Windsor, who will mentor the students, screen patient care needs, and work to maximize insurance benefits.

UMSOD FY 2023 PATIENT STATISTICS*

21,49 patients served

patients 60 and over served



79,918

unique visits



77,03 treatments

*Patient metrics drawn from Baltimore and Shady Grove sites



RIGHT: Under the Delta Dental Patient Care Program for Seniors, patients who qualify will be able to receive essential prosthetic treatment such as dentures or partial dentures.

Dental students, who have received training about the new program, will refer potential patients to Windsor, who will mentor the students, screen patient care needs, and work to maximize insurance benefits.

In addition to gaining clinical experience, the dental students will play a key role in administering pre- and post-procedure surveys to the patients to gather information that will enable the development of new clinical programs tailored to an increasingly aging patient population.

The information gathered through the surveys will include age and residence of the patient, whether the patient returns for treatment after the denture case is completed, patient satisfaction, and average time for completion and follow-up for each case.

"This grant will allow us to provide the needed care for many patients who otherwise would not be able to have dentures made," Windsor said. "Generally, there is a cost of about \$2,000 to \$2,200 for each patient if they are going to get an upper and lower denture. Even with the reduced fees offered to patients who receive care in the student clinics and financing offered by the school, many patients cannot afford the required down payment."

The need for excellent dental care for older patients is significant. By 2060, adults age 65 years or older are expected to make up 24 percent of the United States' overall population, according to the U.S. Census Bureau. Older Americans with the poorest oral health tend to be those who are economically disadvantaged, house-bound, lacking insurance, or members of racial and ethnic minorities.

In Fiscal Year 2023, UMSOD provided oral health care to 21,494 patients, and 7,138 of them — or about one-third — were 60 or older.

The link between good oral health and overall health is widely recognized. Nonetheless, adults without dental coverage often will wait until pain drives them to seek a dentist's care, Windsor said

"The population is aging, and many older people are living on a fixed income. For a lot of people, the cost can be too much to pull together when they are trying to pay for rent and food and transportation," he said.

About two in three older adults suffer from gum disease, and nearly one in five has lost all their teeth, according to the Centers for Disease Control and Prevention. Those with chronic conditions such as arthritis, diabetes, heart diseases, and chronic obstructive pulmonary diseases might be more likely to develop gum disease but less likely to seek dental care. Additionally, over-the-counter and prescription medications may cause decreased saliva, which increases the risk of cavities.

Nearly 20 patients already have been identified as potential candidates for the Delta Dental Patient Care Program for Seniors program, which launched Aug. 21, Windsor said. For example, one older patient who may qualify came to the clinic in great pain. Ultimately, he needed to have 14 teeth extracted.

"The kind of care he needs used to be out of reach for many of our patients. Until now, we weren't able to complete these kinds of cases the way we would have wanted, but under this grant we are able to do so," Windsor said.

"Our hope is that by demonstrating the need and the essential care we are able to give these patients — and the effect it has on our patients' lives — we will be able to expand the program." Md

Continuing Education Courses



The University of Maryland School of Dentistry (UMSOD) is committed to lifelong dental education and offers myriad courses throughout the year that are open to all oral health professionals. Below is a partial listing of the upcoming classes in 2024.

The classes listed below will be offered at UMSOD

650 W. Baltimore St. Baltimore, MD 21201

- Comprehensive Blood Glucose Management for Health Care Providers Presented by Suzanne K. Burgee, MSDH, RDH
 - Saturday, Jan. 27, 8:30 a.m. to 3:30 p.m.

 Oral Squamous Cell Carcinoma and Artificial Intelligence in Oral Medicine and Pathology

Presented by John Basile, DDS, DMSc, and Ahmed S. Sultan, BDS, PhD Saturday, Feb. 10, 9 a.m. to 3:30 p.m.

 Introduction to Dental Cone Beam Computed Tomography

Presented by Jeffery B. Price, DDS, MS, MAGD, FICD, and Azin Parsa, DDS, MSc, PhD Thursday, Feb. 29, 8:30 a.m. to 4:30 p.m.

 Advanced Uses of Dental Cone Beam Computed Tomography

Presented by Jeffery B. Price, DDS, MS, MAGD, FICD, and Azin Parsa, DDS, MSc, PhD Friday, March 1, 8:30 a.m. to 4:30 p.m. Saturday, March 2, 8:30 a.m. to 12:30 p.m.

> Optimum Aesthetics: Hands-On Course (limited to 25 participants)

Presented by David V. Mazza, DDS, CAGS, DABAD, DICOI Friday, April 5, 8:30 a.m. to 4 p.m. Saturday, April 6, 8:30 a.m. to 4 p.m.

New Drug Enforcement Administration (DEA) Continuing Education Requirement

The Consolidated Appropriations Act of 2023 enacted a new, one-time, eighthour training requirement for all DEA-registered practitioners on the treatment and management of patients with opioid or other substance use disorders.

New courses on the topic of **Substance**Use Disorder Management are now available through UMSOD Online Training. Participants may access UMSOD's userfriendly online platform and complete the course at their own pace.





LEFT TO RIGHT: Jeffery Price, co-director, and Ahmed Sultan, director, aim to create explainable models of Al through their work with UMSOD's new Division of Artificial Intelligence Research.

UMSOD Establishes Division of Artificial Intelligence Research

BY HOLLY SELBY

n the seventh floor of the University of Maryland School of Dentistry (UMSOD), Ahmed Sultan, BDS, PhD, and Jeffery B. Price, DDS, MS, are working to expand the boundaries of artificial intelligence-assisted diagnostics. Their goal is to develop new ways of diagnosing diseases and creating dental and dental predictive models with greater transparency, precision, and, ultimately, better patient outcomes.

It is an ambitious and potentially transformative project — part of UMSOD's new Division of Artificial Intelligence (AI) Research. Housed in the Department of Oncology and Diagnostic Sciences (ODS), it is directed by Sultan, assistant professor, program director of Oral and Maxillofacial Pathology Residency, and codirector of Oral Medicine Programs at the University of Maryland Marlene and Stewart Greenebaum Comprehensive Cancer Center and UMSOD.

Co-directed by Price, clinical professor and director of the Division of Oral Radiology, ODS, the division will include a multidisciplinary team of faculty, postdoctoral researchers, and doctoral and dental students.

"At the School of Dentistry, we have access to enormous data sets of invaluable information, including that of rare oral diseases and cancers," Sultan said. "By mining that data and collaborating with the multidisciplinary teams of experts at UMSOD, the University of Maryland School of Medicine, and our external computer vision Al experts, we can explore and expand the potential of Al in oral and maxillofacial medicine, pathology, and radiology."

Developing AI models that can explain how they reach their decisions is another priority for the division, Price said. Only then can practitioners confidently apply AI findings and improve their own diagnoses and treatment plans.

He noted that although AI is used increasingly in the medical fields, a 2022 survey conducted by the Pew Research Center found that 60 percent of the 11,000 respondents would not feel comfortable if their health care providers relied on artificial intelligence to diagnose and propose treatments.

"Our mission statement includes the phrase 'explainable, interpretable, and transparent AI,' " Price said. "AI algorithms can be developed so that the program will explain how it makes its decisions. And by creating interpretable or explainable AI models, we will be able to allow clinicians to see what and how predictions are made by AI, and this will build trust."

Through the use of Institutional Review Board-approved research projects, the new division has access to UMSOD's imaging and patient record databases. Over the course of several years, for example, Sultan used a virtual slide microscope scanner, which is able to scan 100 slides at extremely high resolution at once, to transform more than 27,000 oral pathology glass slides from tissue samples to digital whole slide images (WSI).

In addition, the oral radiology data set includes about 500,000 digital radiographic images drawn from the school's archives.

"It is safe to say that UMSOD is one of the only dental schools in the U.S. to have such an extensive, high-resolution, oral radiology cone beam computed topography [CBCT] images and oral pathology WSI database," Sultan said.

Ultimately, the plan is to merge and continue building upon the imaging information, as well as to incorporate UMSOD's approximately 100,000 active dental axiUm records that include structured (non-free text data such as e-prescriptions, periodontal charting, hard tissue dental charting, etc.) and unstructured data (i.e., free-text notes written by clinicians).

"The idea is to use our data from UMSOD — not 'general' data from the internet, but our data — and train our Al algorithms so they are accurate and reliable," Price said.

The division already has produced interesting research findings. One article about Al-assisted detection of calcifications within the carotid arteries on dental CBCT was published in *Oral Surgery, Oral Medicine, Oral Pathology, Oral Radiology* in August.

Price and Sultan were among the co-authors from UMSOD, along with Shahd A. Alajaji, BDS, doctoral student, Division of Al Research; Radi Masri, DDS, MS, PhD, professor and chief, Division

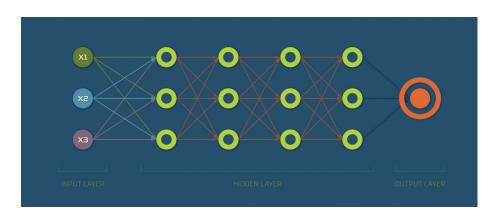
of Prosthodontics, and director, Postgraduate Prosthodontics in the Department of Advanced Oral Sciences and Therapeutics; and Vandana Kumar DDS, MS, part-time faculty, ODS.

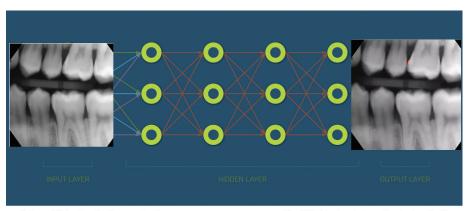
The article described the potential for using AI methods in medical image analysis to alert clinicians to the presence of significant incidental pathology. It also highlighted the potential of how AI models, by using already available standard-of-care images, can contribute to more timely referrals of cardiovascular disease — and lead to improved patient outcomes.

Al can segment different anatomical features in the head and neck such as the mandible and the spine, Sultan said. But it also can depict more subtle features such as carotid calcifications that, if detected early, could lead to the prevention of strokes and myocardial infarction.

"We know dental practices are very busy, and not all dentists have the additional training to review anatomic findings and abnormalities in the skull base or in the neck," Sultan said. "And what AI models can do is highlight exceedingly small subtleties, very minute calcifications that could indicate a need for an early referral to a cardiovascular specialist."

Sultan and Price serve on working groups formed by the American Dental Association (ADA) that are charged with





Early mesial demineralization seen tooth #14 in the BW on the left (input layer)

The CNN detects and shows the demineralization in the output layer image.

LEFT: The top image shows a schematic illustration of an artificial neural network (ANN), which is the basic building block of deep learning (DL).

The first vertical row on the left represents input data, such as the radiograph seen on the left side of the bottom image. The next four rows of green circles in the top image represent the "hidden layers" of the ANN, which are required for DL algorithms to function.

The last orange circle on the right of the top image is an output of the ANN and is represented on the right side of the bottom image by the same "input" radiograph but with a small solid pink overlay over the interproximal region of the upper molar tooth (#14 mesial) signifying the location of an area of enamel demineralization detected by the AI algorithm.



developing the U.S. position on AI and dental informatics. ADA is accredited by the American National Standards Institute to develop the U.S. position on all international dental standards.

Looking ahead, the division has several other exciting projects in the works including assessing six medical AI chatbots in terms of quality and safety of patient-level dental and medical information for important oral mucosal conditions and investigating the ethical implications of generative adversarial networks, a new form of AI that generates synthetic image data to supplement rare data sets.

There also are ambitious plans to expand the division's research capabilities. Most AI results today are accurate about 90 percent of the time — about the same level of accuracy as medical and oral radiologists and clinicians, Price said.

"Of course, Al is a lot faster. But how do you reach that final holy grail of Al being accurate at detecting abnormalities more than 90 percent of the time so that you can rely on it all the time?" he said. "The goal is for greater accuracy so it is even more accurate and faster than humans, and that it is trusted by clinicians and researchers — and patients. And that's who we're ultimately serving." Md

To watch a video about UMSOD's Division of Artificial Intelligence Research, visit *dental.umaryland.edu/sotsai.*

"The idea is to use our data from UMSOD — not 'general' data from the internet, but our data — and train our Al algorithms so they are accurate and reliable."

JEFFERY PRICE, CO-DIRECTOR, DIVISION
 OF ARTIFICIAL INTELLIGENCE RESEARCH

Lasting Impressions

Laures In celebration of faculty accomplishments



Jose A. Bosio, BDS, MS, clinical professor, division chief. and postgraduate program director, Department

of Orthodontics and Pediatric Dentistry, and the Alumni and Friends Professor in Orthodontics, was selected as the board director for the Middle Atlantic Society of Orthodontics and chair of the American Association of Orthodontists' Council on Scientific Affairs.



Garv Hack, DDS. clinical associate professor, Division of Prosthodontics, Department of **Advanced Oral** Sciences and

Therapeutics, co-authored "Novel Dental Low-Shrinkage-Stress Composite with Antibacterial Dimethylaminododecyl Methacrylate Monomer," which was published in the Journal of Functional Biomaterials in June.



Mary Anne S. Melo, DDS, PhD, MSc, FADM, FACD, clinical professor and chair, Department of Comprehensive

Dentistry, was among the co-authors of "Developing Bioactive Dental Resins for Restorative Dentistry," which was

published in the Journal of Dental Research in August, and "Bioactive Dental Materials: Developing, Promising, Confusing," which was published in JADA Foundational Science in April.



Oksana Mishler. RDH, MS, DHSc, clinical instructor, Division of Periodontics. received the Teacher of the Year

Award from the graduating dental hygiene Class of 2023.





Jin Ro, PhD, professor; Joyce Da Silva, PhD, assistant professor: and Richard Traub, PhD, professor

and chair, all of the Department of Neural and Pain Sciences, received a \$1.88 million grant over four years from the National Institutes of Health to investigate the role of testosterone on mediating sex and gender influences on chronic orofacial pain conditions.



Alison Scott, PhD, assistant professor, Department of Microbial Pathogenesis. and colleagues received a

\$2.8 million grant from the National Institutes of Health to research lipid droplet homeostasis in Alzheimer's disease.



Sheryl Syme, RDH, MS, FADHA, associate professor, Division of Periodontics. Department of **Advanced Oral**

Sciences and Therapeutics, was inducted into the inaugural class of 162 American **Dental Hygienists' Association Professional** Fellows.



Norman Tinanoff, DDS, MS, professor, Department of Orthodontics and Pediatric Dentistry, received the 2023 Evidence-

Based Dentistry (EBD) Faculty and Practice Award at SmileCon, the American Dental Association's (ADA) annual meeting, in October. Presented by ADA and the American Association for Dental, Oral, and Craniofacial Research, the awards are supported by Colgate and recognize educators and clinicals who have made significant contributions to EBD.

Alumni

From the Alumni Association



Dear Fellow Alumni:

I would like to take this opportunity to introduce myself. I am Joanne Block Rief, DDS '86, the new president of the University of Maryland School of Dentistry (UMSOD) Alumni Association Board of Directors. For those who do not know me well, I have a difficult time saying "no," especially

when it comes to dentistry and UMSOD.

About three years ago, when past president Marc Nuger, DDS '79, called and asked me to serve as president of the alumni association, I could not turn him down. In fact, I was honored.

I am a third-generation dentist and UMSOD graduate, following in the footsteps of my father, Stanley Block, DDS '58, and my late, great-uncle, Philip Block, DDS '33.

Besides practicing dentistry full time for my entire career, I am a longtime member of UMSOD's Alumni Association Board of Directors and have enjoyed being involved in many diverse aspects of my profession. Now it is my turn to step up and serve as the board's president. It seems fitting for me to take the position at this time: My father was president of the Alumni Association Board of Directors when he had been practicing dentistry for 37 years, and now, after practicing for 37 years, I have taken the helm.

I hope to lead with creativity and innovative ideas. As a proud UMSOD graduate, I am looking forward to moving into 2024 with an

alumni association that can provide resources for the school and its faculty, staff, students, and alumni. We can, and should, be there for each other. To do this, we should get involved and give back to the school every year, however we are able.

A great way to stay involved with UMSOD is to attend our next All-Alumni Reunion, scheduled for May 31-June 1, 2024. Although we will be celebrating the classes with years ending in 4 or 9 in particular, there will be plenty of fun events for everyone. Please watch for information and updates about our 2024 reunion.

I would like to acknowledge the fantastic turnout of our alumni at the Chesapeake Dental Conference in Hanover, Md., and at SmileCon in Orlando, Fla. Held in October, both conferences included receptions for our alumni. I also would like to recognize Baltimore dentist George R. Shepley, DDS, who recently completed his term as president of the American Dental Association. Although Dr. Shepley is not a graduate of UMSOD, he has made the dentists of Maryland proud, and we thank him for his hard work and dedication to our profession.

My hope for the coming year is that each of us will reach out and mentor at least one dental student or attend at least one alumni event. This will ensure that our school's future will remain bright and it will continue to be known not only as the oldest dental college in the world, but also as one of the best anywhere.

Joanne Block Rief, DDS '86

President | Alumni Association Board of Directors

In Memoriam

We are saddened by the loss of the following alumni, faculty, and friends: Robert R. Callahan, DDS '56 Ronald E. Collins, DDS '54 John A. Doran Jr., DDS '79 Marcia Henson-Coakley, DDS '87 Frederick L. Hodous, DDS '59 Melvin J. Jagielski, DDS '53 Ralph S. Johnson, DDS '56 Marc E. Moskowitz, DDS '72 Helmer E. Pearson, DDS '60 Robert Simmons Jr., DDS '80 Daniel J. Sullivan, DDS '59 *The school learned of the passing of these alumni, faculty, and friends between April 7 and Sept. 6, 2023.





Denied a dental education in Prussia and Germany, Emilie Foeking pursued her dream of becoming a dentist in the United States.

AgentOfChange

How Emilie Foeking, DDS, Became UMB's First Woman Graduate

BY TARA WINK

One-hundred fifty years ago, Emilie Foeking made the crowning achievement of her academic career: She became the first woman to graduate from a University of Maryland, Baltimore (UMB) school.

Foeking (sometimes spelled Focking) graduated from the Baltimore College of Dental Surgery (BCDS), a predecessor to the University of Maryland School of Dentistry (UMSOD), in 1873 with her Doctor of Dental Surgery degree; her graduation also marked the first time a woman had graduated from any medical or dental school in Baltimore.

Foeking was born Dec. 1, 1837, at Georgenthal, the estate of her father, Georg Foeking, near Dirschau in Danzig, Prussia, and was one of 12 children. Her sister, Therese Foeking, was a well-known kindergarten teacher and children's book author.

When Emilie Foeking sought a dental education in Prussia and Germany, she was denied admittance, because women were not permitted to study in the country's medical or dental schools. Therefore, Foeking pursued a degree in the United States, where countrywoman Henriette Hirschfield had just

obtained a dental degree at the Pennsylvania College of Dental Surgery in 1869. Hirschfield was the first German woman to graduate with a dental degree in the United States. Unfortunately, when Foeking applied to the Pennsylvania school, she was turned away because the male students at the school vehemently protested woman students as distractions and unfit for dental education.

Dr. James Truman, then dean of the Pennsylvania College of Dental Surgery, contacted BCDS Dean Ferdinand J.S. Gorgas asking for his consideration of Foeking. She was admitted to the school and graduated Feb. 27, 1873.

'Novelty' Vs. Important Milestone

Her graduation received mixed reports in local and national newspapers and professional journals. The *Baltimore American* reported her graduation as an "interesting feature" and a "novelty." The article included a brief statement of her academic performance and a lengthy description of Foeking's attire and appearance, a sketch not made of her male colleagues. The report of her graduation was reprinted in other state papers, including the *Richmond Dispatch*, in articles of a similar manner.

Alternatively, the American Journal of Dental Science, the first dental periodical in the world, reported about Foeking's graduation in March 1873. In this article, Foeking's graduation was highlighted as an important milestone in BCDS' 33-year history. The article highlighted her achievements and work and placed faith in her abilities as a dentist, stating, "That she will succeed in establishing a large and lucrative practice, there is no doubt, as she is well qualified professionally, and is in manner so perfect a lady as to command the respect of all who know her."

Additionally, Foeking's BCDS thesis "Is Woman Adapted to the Dental Profession?" was published in the April 1873 edition of the *American Journal of Dental Science*. Foeking's thesis was a response to the widespread belief in the United States and Europe that women were incapable of successful careers

Foeking pursued a degree in the United States, where countrywoman Henriette Hirschfield had just obtained a dental degree at the Pennsylvania College of Dental Surgery in 1869. Hirschfield was the first German woman to graduate with a dental degree in the United States.

in medical fields. Foeking, while steering clear of calling herself a "strong-minded" feminist, specifically outlines the reasons why women are well suited for these fields and why 19th-century society should accept women in these roles and remove the associated stigma. Her thesis remains a strong contemporary argument for women's place in science, technology, engineering, and math fields.

From Baltimore to Germany

After graduation, Foeking remained in Baltimore, working with a dentist and 1865 BCDS graduate, Dr. Thomas Sollers Waters, at 43 Hanover St. until the building was damaged in a fire in September 1873. Foeking was living in the building at the time and had to be carried from the residence but was not hurt.

In 1874, Foeking married Johann Heinrich Wiede, a dental technician, in Berlin, Germany. She had dental practices in Danzig, Schwerin, Leipzig, and Stralsund. Wiede-Foeking finally landed in Lübeck, where she practiced until 1910. Her daughter, Emilie Wieda (Anglicized Emmy Wyda), was an actress who appeared in 80 films from 1913 to 1941.

Foeking died in Dresden on Nov. 28, 1910. After Foeking's graduation from BCDS, women continued to receive dental education at the school after it merged with UMSOD in 1924. Md

- REPRINTED FROM THE SPRING 2023 ISSUE OF CATALYST MAGAZINE

Friendships and Festivities

From Warm Welcomes to Icy Desserts, 2023 All-Alumni Reunion Offers Plenty of Fun



1. LEFT TO RIGHT: The 2023 Alumni Award recipients Charles A. Doring, DDS '87, Distinguished Public Service; Lisa Bress, RDH '83, Linda DeVore Dental Hygiene; Harlyn K. Susarla, DMD, MPH, Peds '16, Rising Dental Health Leader; and Douglas Barnes, DDS '83, MS, Distinguished Achievement.

2. Ammar Hasan, Class of 2025, and Frances Morales, Class of 2026, participated in a panel discussion about what dental school is like today.



Photos by Zinnia Films

Some might say that the University of Maryland School of Dentistry's (UMSOD) 2023 All-Alumni Reunion Weekend was more celebratory than usual. Because in-person events were put on hold during the COVID-19 pandemic, the 2023 reunion honored classes with years ending in 3 or 8 while six classes celebrated their 50th reunions, all at once.

The two-day event began with the Dr. Harry Dressel Jr. Memorial Lecture, featuring Mark A. Latta, DMD, MS '95, dean emeritus and professor of general dentistry at the Creighton University School of Dentistry in Omaha, Neb. Next up was a ceremony honoring the recipients of the Distinguished Alumni Awards, followed by a warm welcome reception.

The next day's events included tours of the school, lunch, an ice cream social, the Alumni Association Board of Directors' annual open meeting, and a UMSOD Connect networking event featuring current students and alumni trading observations, memories, questions, and answers.

The weekend culminated with a dinner honoring alumni from the Classes of 1973, 1972, 1971, 1970, 1968, and 1963 who gathered in celebration of their 50th and 50-plus anniversaries.

- HOLLY SELBY











- 3. Mark A. Reynolds, DDS '86, PhD, dean and professor, presents Marc Nuger, DDS '79, outgoing president of the Alumni Association Board of Directors, with a commemorative plaque and gavel at the board's annual public meeting.
- 4. LEFT TO RIGHT: Trung Ho, DDS '85; Andrew Ho; Tien Ho, DDS, Pros '97; and Sylvia Matz
- **5.** David Dempsey, DDS '73, and Robert Deery, DDS '73, swap stories at the 50th reunion celebration.
- **6.** Mark Latta, dean emeritus and professor of general dentistry at the Creighton University School of Dentistry, gave the keynote speech at the Dr. Harry Dressel Jr. Memorial Lecture.
- 7. Carol Anderson, DDS '88, and Dianna Weikel, BS '82, MS '87, chat at the welcome reception.



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2024 ALL-ALUMNI REUNION