

**Advancing Oral Health.  
Improving Lives.™**

**PIONEERING WORK**

MPower Professor Richard Traub is unraveling the mysteries of chronic pain.

**WHAT DO YOU THINK?**

Don't forget to take the alumni survey inside this issue.

**SCENE THIS?**

Check out a snapshot of what's happening at UMSOD.

# Mdental

THE MAGAZINE OF THE UNIVERSITY OF MARYLAND SCHOOL OF DENTISTRY | WINTER 2025



## GETTING THE GREEN LIGHT

UMSOD Researchers Move Forward in Studying  
Green Light Therapy to Fight Pain and Anxiety





Photo by Laura Lee

# OfNote

In celebration of National Dental Hygienist Month, University of Maryland School of Dentistry (UMSOD) dental hygiene students held a community baby shower Oct. 17, delivering valuable information about oral health during pregnancy to expectant and new mothers.

Second-year Clinical Dental Hygiene Leader students Emily Chaffer, Jena Baguyos, Simran Uddin, and Jade Harris presented information on oral health during pregnancy and infancy to approximately 10 mothers from the Women's Health Center and patients from the University of Maryland Medical Center's Midtown and Redwood practices.

"Pregnancy is a very teachable time for moms because they're really into doing what's best for the baby, so they're ready to learn," said Lisa Bress, RDH, MS, UMSOD clinical associate professor and division chief, Dental Hygiene Program, Department of Advanced Oral Sciences and Therapeutics. "The healthier the mom's mouth is, the healthier the baby's mouth is once the baby is delivered." **MJ**

— LAURA LEE

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**LEFT TO RIGHT:** Second-year Clinical Dental Hygiene Leader students Jena Baguyos, Emily Chaffer, Jade Harris, and Simran Uddin, with Lisa Bress, division chief, Dental Hygiene Program

# Contents



16



20



24

## Features

### 16 EMPOWERING EXCELLENCE

Andrea Morgan, UMSOD clinical assistant professor, receives UMB's Founders Week Educator of the Year Award.

### 20 TICK TACK

UMSOD researchers describe the link between tick bites and hypersensitivity to dental products.

### 24 MICROBES, MODELS, MEDICINE

Clinician-scientist Vivek Thumbigere-Math uses "bench-to-chairside-and-back" approach to new discoveries.

### 2 MESSAGE FROM THE DEAN

#### ON THE CUSP

### 3 Successful Collaboration:

At the Mission of Mercy, faculty, staff, and students work together to provide free oral health care to those in need.

### 7 Your Opinion Matters:

We'd love to learn what you think! Alumni are invited to respond to a readership survey.

### 10 Five Questions With:

Meet Qoot Alkhubaizi, UMSOD's recently appointed assistant dean of clinical affairs.

### 11 Lasting Impressions:

From keynote speeches to impactful publications, UMSOD's faculty members never cease to excel.

#### INNOVATION + DISCOVERY

### 15 Chronic Pain, New Clarity:

UMSOD researcher Richard Traub's innovative work reshapes how scientists understand chronic overlapping pain conditions.

#### ALUMNI

### 29 A Great Get-Together:

Longtime connections, new acquaintances, and impressive accomplishments are celebrated at UMSOD's 2025 All-Alumni Reunion.







Innovation, expertise, and compassion always have been hallmarks of the University of Maryland School of Dentistry (UMSOD), and this issue of *Mdental* reflects that in many ways.

You'll read about several of our faculty members who continue to expand the boundaries of oral health research. Richard Traub, PhD, recipient of a 2025 MPower Professorship awarded by the University of Maryland Strategic Partnership: *MPowering the State*, is celebrated for his groundbreaking work. His research advances how scientists understand — and potentially treat — chronic overlapping pain conditions.

As both clinician and scientist, Vivek Thumbigere-Math, BDS, PhD, seamlessly moves between patient care and the laboratory, investigating whether bacteria from the mouth can travel to the gut and trigger inflammatory bowel disease. Meanwhile, Joyce Da Silva, PhD, and co-investigator Jin Ro, PhD, MA, are conducting a study that explores how green light therapy might relieve chronic pain and anxiety, opening new possibilities for patient-centered care.

Additionally, John Brooks, DDS, is lead author on a recent study that identifies potential dangerously adverse reactions to some dental products in patients who suffer from alpha-gal syndrome as the result of a tick bite.

These remarkable research endeavors underscore the depth of talent and dedication within our community. Just as our faculty work to push the boundaries of discovery, our educators are equally committed to shaping the next generation of dental professionals. It is in this spirit of excellence that I am also pleased to announce that Andrea Morgan, DDS, MS, was named the University of Maryland, Baltimore's 2025 Founders Week Educator of the Year. This honor recognizes outstanding teaching, innovation, and dedication to student learning.

You'll also be introduced to Dawn Roberts, EdD, who has stepped in to lead our newly established Office of Organizational Wellness and Engagement. Already, she has launched initiatives ranging from Mindfulness Mondays, a series of events designed to enhance the health and well-being of our students, faculty, and staff, to a collaborative team comprising key faculty and staff members who will focus on helping students thrive personally and academically.

Our commitment to expanding access to oral health for underserved populations in Maryland and beyond remains unwavering. In these pages, you'll read about our dental hygiene students sharing vital oral health information with expectant and new mothers at a community "baby shower" held in Baltimore, as well as dental and dental hygiene students providing free care to more than 80 patients at the Universities at Shady Grove dental clinic.

I hope you enjoy reading about the many ways in which our students, faculty, and staff are shaping a healthier future for Baltimore and beyond.

Warm regards,

Mark A. Reynolds, DDS '86, PhD  
Dean and Professor

# Mdental

## ON THE COVER

UMSOD researcher Joyce Da Silva, PhD, is leading innovative investigations into green light therapy for pain and anxiety and personalized strategies for treating alcohol use disorder. **LEFT TO RIGHT, FRONT ROW:** Collaborating researcher Jin Ro, PhD, MA, and Da Silva pose in the green light room used for therapy exposure. **LEFT TO RIGHT, BACK ROW:** Renan F. do Espírito Santo, PhD; Michael Keaser; and Laura Ventura, all members of the Da Silva lab

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# OnTheCusp

## UMSOD Students and Faculty Provide Free Dental Care at Shady Grove Clinic

BY HOLLY SELBY

**B**y mid-afternoon on Oct. 17, the line at the state-of-the-art, University of Maryland School of Dentistry (UMSOD) clinic at the Universities at Shady Grove in Montgomery County, swirled past the end of the receptionists' desk and continued across the waiting room to the lobby entrance. Its members were waiting patiently to register for a Mission of Mercy (MOM) event that, by day's end, would provide 83 patients with free dental treatments.

The MOM program provides essential dental care to uninsured and underserved adults who might otherwise go without treatment. Through a partnership between UMSOD and Catholic Charities of Washington, D.C., the Shady Grove clinic offers free extractions and fillings to adults 18 and older who lack access to regular dental care. Now in its third year, the Shady Grove program is held in April and October.

Overall, 40 third- and fourth-year dental students and 10 dental hygiene students volunteered their time to provide oral health care, 13 UMSOD faculty members were on hand to provide support and supervision, and 10 University of Maryland School of Nursing students volunteered to help provide medical screenings such as blood pressure checks.

"We were thrilled to collaborate with the University of Maryland School of Nursing, Catholic Charities, and our dental hygiene students. Their contributions were invaluable, making the MOM event a resounding success," said Halima Karim, DDS, FAGD, FACD, director of clinical services at Shady Grove. "We also appreciated the support of Coaching Salud Holistica, a group of Latina community health workers, who provided social, medical, and mental health resources to underserved community members."

Although Alan Shen, DDS Class of 2027, had volunteered previously at a MOM event as a pre-dental college student, the Shady Grove event was both rewarding and illuminating. "I was able to assist with treating different patients and help provide dental care without having to worry about how the patient would pay for the care," he said.

"I learned that language can be a large barrier to care: Most



Madeleine August, DDS Class of 2026, describes treatment options to her patient.

Photos by Holly Selby



Ramsay Koury, Mission of Mercy coordinator, discusses patient treatment with Alan Shen, DDS Class of 2027.



Third-year dental student Ifunanya Chukwukelo examines a patient's oral cavity.

of my patients during the MOM almost exclusively spoke Spanish. Having translators there helped immensely and showed that without them or without a provider that spoke Spanish, the patient could have trouble finding the best dental care achievable."

Noting that many of the patients seen that day do not visit a dentist regularly, Ramsay Koury, DMD, clinical assistant professor, Division of General Practice, and MOM coordinator, said that the goal of the event extended beyond the close of the day.

As the patients' treatments reached completion, the staff discussed future options for treatment including reduced-fee care provided at Shady Grove. "We're hoping that now that they have received care here, we also can help them find continuing care," Koury said. **MJ**

# Scene Around School

## Falling Into the Academic Year

**T**he University of Maryland School of Dentistry (UMSOD) kicked off the fall semester by welcoming students, faculty, and staff with a blend of celebration and orientation. From icy treats at the Community Social to Club Night, the school was alive with connection, curiosity, and a shared commitment to oral health education and care. **MD**



*Photos by Holly Selby*

UMSOD dental and dental hygiene students, residents and postdoctoral fellows, and faculty and staff members enjoyed chilly ice cups and warm conversations at the Community Social on Aug. 25.



Mark A. Reynolds, DDS, PhD, UMSOD dean, welcomes the first-year dental class to the School of Dentistry.



During Orientation Week, held Aug. 11-15, members of the DDS Class of 2029 were introduced to a deluge of new information — from peers' and professors' names to how to utilize the Health Sciences and Human Services Library.





Photo by Holly Selby

Members of UMSOD's Wellness Committee — Kelly Zhang, DDS Class of 2027; Jamie Derkasch, DDS Class of 2027; Dawn Roberts, EdD, MA, associate dean of organizational wellness and engagement; Jenny Yin, DDS Class of 2026; and Yijing Geng, DH Class of 2027 — enjoy planning an array of events aimed at cultivating student wellness throughout the fall semester. (See related article on p. 6.)



Photo by Maya Patel

Fourth-year dental students Raheel Raad and Justin Maduka introduce the Orthodontic Interest Group to interested students.

## UMSOD Educators Host Inaugural Event Aimed at Addressing Statewide Dental Hygienist Shortage

BY HOLLY SELBY

**R**epresentatives from seven of Maryland's eight dental hygiene programs, public health leaders, and Maryland Dental Hygienist Association members gathered Aug. 15 to collaborate on community-engaged service-learning projects aimed at benefiting underserved communities in non-traditional settings.

The goal of the inaugural event, held at the Dr. Samuel D. Harris National Museum of Dentistry, was to develop innovative ways of addressing the statewide shortage of dental hygienists while enhancing dental hygiene curricula. Eighty-six members of the Maryland Coalition of Allied Dental Education attended.

Organized by Lisa Bress, RDH, MS, clinical associate professor and chief, Division of Dental Hygiene, and Debbie Jones, DDS, clinical assistant professor, Division of Periodontics, both in the Department of Advanced Oral Sciences and Therapeutics, University of Maryland School of Dentistry, the initiative was funded through the University of Maryland, Baltimore's Institute for Clinical & Translational Research, the ADEAGies Foundation, and the CareQuest Institute for Oral Health.

MD



**LEFT TO RIGHT:** Debbie Jones, clinical assistant professor, Division of Periodontics, and Lisa Bress, clinical associate professor and chief, Division of Dental Hygiene, both in the Department of Advanced Oral Sciences and Therapeutics

Attendees participated in museum tours.



# Wellness with a Capital ‘W’

BY HOLLY SELBY

**W**hen Dawn Roberts, EdD, MA, stepped into her new office in July, the whiteboard was blank — literally and figuratively. Hired to lead the new Office of Organizational Wellness and Engagement at the University of Maryland School of Dentistry (UMSOD), her goal is to create holistic well-being solutions for all school community members.

Already, she has mined evaluations filled out by faculty, staff, and students to identify areas that may affect the overall “wellness” of the school, including a wish for more stress-coping resources, inconsistent communication channels, and students who crave a stronger voice in decision-making. She then began consulting Student Government Association (SGA) representatives and other student leaders to begin collaborating on solutions, ensuring that they aren’t just passive recipients but active partners.

Over time, Roberts, whose title is associate dean for organizational wellness and engagement, plans to share success stories and propose new initiatives. Her guiding principle, she said, is simple: Listen first, act second.

“When individuals thrive, the institution’s culture follows,” she said. “Engagement spikes, retention improves, and the school’s reputation shines.”

Noting that Roberts is renowned for her student-centered leadership and deep understanding of organizational dynamics, UMSOD Dean Mark A. Reynolds, DDS, PhD, said, “Our goal is to ensure that our school is a place where people feel they belong, are supported, and can thrive both personally and professionally. I am confident that Dr. Roberts will bring expertise, warmth, and strategic insight to this important new role.”

A graduate of the University of Delaware and the University of Maryland, Baltimore County, Roberts began her professional journey in 2000 at the University of Maryland Medical Center as an administrative assistant supporting faculty physicians. Over time, she advanced to coordinator and associate director roles — guiding career and residency advising, mentoring the SGA, and championing the Student National Medical Association. Those formative years taught her two critical lessons: High achievers often neglect self-care, and effective programming starts with active listening.

“I noticed medical students were burnt out before I even knew the term ‘burnout,’” Roberts said. “They’d skip the gym to study, only to find their grades and mood slipping. It became clear that wellness isn’t something that is nice to



Photo by Yorghos Carabas

**“When individuals thrive, the institution’s culture follows. Engagement spikes, retention improves, and the school’s reputation shines.”**

— DAWN ROBERTS, UMSOD’S ASSOCIATE DEAN FOR ORGANIZATIONAL WELLNESS AND ENGAGEMENT

have, it is mission critical.”

In 2016, she left the United States to work in Antigua and Barbuda in the Caribbean. Tasked with developing a new cultural climate for the students, faculty, and staff at the American University of Antigua College of Medicine, she designed interactive workshops on communication, de-escalation, emotional intelligence, and professionalism tailored to serve a diverse student body. Additionally, she developed curriculum and taught medical students, worked as an ombudsman, and offered faculty workshops on stress reduction and emotional intelligence.

“That experience was transformational,” Roberts said. “I learned how language shapes mindset, how laughter bridges cultural divides, and how small, consistent routines empower students to face academic pressures.”

In 2022, Roberts was appointed associate dean and head of the Office of Student Affairs at West Virginia School of Osteopathic Medicine. There, she piloted a “Wellness Week” that featured mindful morning stretches, nutrition demos, crafts, and faculty-led discussion panels. She also designed a study-buddy program that paired isolated first-year students with seasoned mentors, fostering connections that outlasted orientation.

These days, Roberts speaks of wellness with a capital “W.” For her, the word means far more than being mindful or checking your stress level. It also signifies a way of thinking about health, stress, and the power of collective well-being. **MD**



# After Travels Abroad, UMSOD Students Bring Home Renewed Sense of Purpose

BY BETHANY PROBST

**F**our University of Maryland School of Dentistry (UMSOD) students traveled to San José de Ocoa, Dominican Republic, in June with the goal of delivering dental services to underserved children and adults.

As part of a collaboration between UMSOD and the Rotary Club of Baltimore, the students and their faculty supervisors spent more than a week in the Dominican Republic, providing dental services to nearly 400 patients. The Rotary Club is a nonprofit dedicated to improving lives locally and globally; additional partners in the effort included local Rotarians and other local health care professionals.

During the trip, the UMSOD students performed 325 extractions, 274 fluoride treatments, and 256 fillings under faculty supervision, in addition to demonstrating proper oral health techniques to children and their families.

But the numbers only tell part of the story.

Julie Erhart, a fourth-year student, described the experience as “powerful,” noting, “Working in makeshift clinics without standard equipment taught me that excellent care doesn’t always depend on technology — it depends on intention, adaptability, and heart.”

For Erhart, making dentures for a married couple was especially meaningful.

“When they looked in the mirror for the first time, the wife gave her husband a hug and started crying tears of joy,” she said. “Making dentures for her wasn’t just about replacing missing teeth, it was about restoring her confidence and identity.”

The trip was made possible by Barry W. Rosenthal, DDS ’78, who in 2019 established the Barry W. Rosenthal, DDS ’78, Humanitarian Experiences



Fourth-year dental students Ngozi Douglas, Julie Erhart, Michael Chehade, and Meghan Alexis traveled to the Dominican Republic last summer to help deliver oral health care and education to underserved children and adults.

Fund to provide opportunities for students to have international volunteer experiences.

As the students returned home, they brought back more than sharpened clinical skills — they also brought a renewed sense of purpose and a deeper understanding of dentistry’s power to

improve people’s quality of life.

“Seeing the long-term impact reminded me that service not only transforms lives in the present, but can also inspire the next generation of providers,” Erhart said. “It’s an experience I will remember for the rest of my career.” **MD**



## We’d Like to Hear from You!

Magazines, like so much else in life, can benefit from being refreshed and rethought. With that in mind, we’d love to hear what you like most about your alumni magazine and what you’d like to read about more often.

Stories about students? News about cutting-edge research? Updates about your fellow graduates? Features about faculty successes?

Please let us know what you’re most interested in reading about your alma mater by taking this six-question online survey.

Scan here:





Dental and dental hygiene students take an oath pledging their commitment to their chosen professions at the White Coat Ceremony.

# Commitment to Care

## UMSOD's White Coat Ceremony Honors the Journey Ahead

Photos by  
Matthew D'Agostino / UMB

BY HOLLY SELBY

**A**t the University of Maryland School of Dentistry's (UMSOD) White Coat Ceremony, dental and dental hygiene students, their families, and faculty and staff members gathered to mark a pivotal transition in the students' oral health education.

The annual event, held Sept. 29 at the University of Maryland, Baltimore's Leadership Hall, is a rite of passage that welcomes third-year dental students and second-year dental hygiene students as they don white coats to signify their shift from didactic learning to clinical patient care.

Calling the ceremony a "major milestone in the academic professional journey," UMSOD Dean Mark A. Reynolds, DDS, PhD, told the students that "the white coat you receive today symbolizes the scientific rigor that will guide your clinical decisions and the compassion that will define your care."

Reynolds also expressed appreciation to those in attendance: "I would like to extend heartfelt thanks to our alumni and supporters whose generous sponsorships have helped make this evening so special. We are deeply grateful for your continued investment in our students and our mission."

The program features faculty members "coating" the students as they put on their white coats for the first time and then recite an oath pledging commitment to the ethical and compassionate practice of dentistry and dental hygiene.

Led by Patricia Meehan, DDS, BSN, FACD, FICD,

senior associate dean of academic affairs, the students said in part: "I will strive to merit the trust that society has placed in my profession, faithfully observe its principles of ethics and integrity, maintain the highest standards of personal and professional behavior, and encourage my colleagues to do the same."

The evening also featured inspiring remarks from alumni and guest speakers, including Henry Lee, DDS '79, chair of UMSOD's Board of Visitors; Andrew Horng, DDS '01, PEDS '05, clinical instructor and keynote speaker; and Joanne Block Rief, DDS '86, president of the Alumni Association Board of Directors, among others.

Block Rief encouraged the students to continue learning and honing their professional skills as well as leaning into the humanistic side of dentistry. "While it is important to strive for excellence in your clinical work, it is equally important to treat patients with empathy and compassion," she said.

Each year, UMSOD alumni, friends, and family share "Words of Wisdom" that are hand-written on note cards and placed on each student's chair. The notes may include







At the annual White Coat Ceremony, third-year dental and second-year dental hygiene students celebrate their transition from didactic learning to clinical patient care.



Maryam Abedi, DDS Class of 2027, celebrates her "coating" with her family.

**"I would like to extend heartfelt thanks to our alumni and supporters whose generous sponsorships have helped make this evening so special. We are deeply grateful for your continued investment in our students and our mission."**

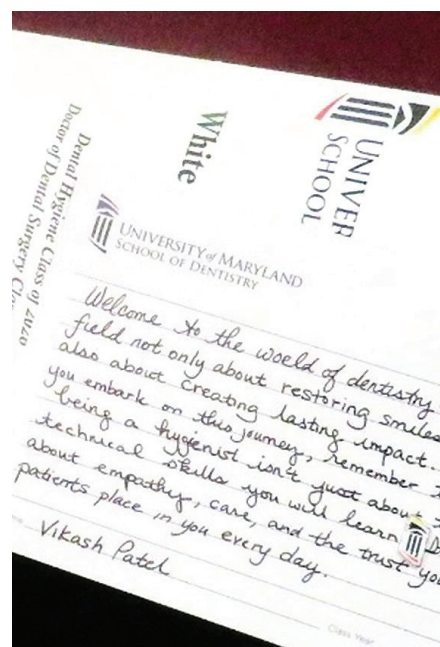
— MARK A. REYNOLDS, UMSOD DEAN

anecdotes, memories, advice, or simple well wishes.

For many of the students, the ceremony marked their transition from student to clinical colleagues-in-training — and provided an opportunity to contemplate past successes and future potential.

"For me, the most meaningful part of the White Coat Ceremony was the unity with my classmates and the chance to celebrate with our families," said Alanna Liebman, DDS Class of 2027.

"Unlike graduations at the very end, this moment in the middle lets us pause together, reflect on how far we've come, and look ahead with gratitude to the journey and hard work we still get to share. Having my family there to witness this milestone made it even more special." **MD**



UMSOD alumni, friends, and family share "Words of Wisdom" that are written on note cards and placed on each student's seat. Here, Vikash Patel, DDS '04, offers warm wishes.

# Five Questions with Qoot Alkhubaizi, UMSOD's New Assistant Dean of Clinical Affairs

INTERVIEW BY HOLLY SELBY



In July 2025, Qoot Alkhubaizi, BSc, BChD, MFD RCS (Ireland), MS, ABGD, was named assistant dean of clinical affairs at the University of Maryland School of Dentistry (UMSOD), a role that places her at the helm of one of the most critical pillars of dental education and patient care. Known for her global vision and commitment to academic excellence, Alkhubaizi brings a wealth of experience and a forward-thinking approach to the position.

With eight years as director of the Advanced Education in General Dentistry program and ongoing leadership in international initiatives in Rwanda, Alkhubaizi is no stranger to complex clinical systems and cross-cultural collaboration. Now, she will work closely with Louis G. DePaola, DDS, MS, associate dean of clinical affairs, to shape the future of clinical operations at UMSOD. From overseeing infection control protocols to crafting strategic plans that elevate both education and care, she is poised to have a transformative impact.

Below, Alkhubaizi answers five questions about her new role:

## What attracted you to this new role?

After leading the Advanced Education in General Dentistry program, I felt a desire to expand my leadership horizons and make a broader impact on clinical dental education and patient care services within UMSOD. I am passionate about providing excellent dental education and patient services. I have strong interest in quality assurance, utilizing technology and data to implement clinical changes, and I enjoy the challenges of maintaining quality patient care while providing quality education. I wanted to collaboratively work with other leaders within the institution to advance our footprint nationally and internationally.

## What do you hope to accomplish first?

The top priority for the 2025-26 academic year is to ensure a successful reaccreditation of our programs. Other priorities include learning from the wealth of institutional knowledge that Dr. DePaola has accumulated throughout his years of leadership and service, continuing to align our clinical operations and patient services with our vision and mission, and exploring new ways to improve access to dental services within the community.

## What do you see as the biggest challenge(s) facing rising dental clinicians?

The continuous increase in costs of the dental profession. Artificial intelligence, the increasing digitization of dentistry, and the changing landscape of dental practice are also challenges facing our newly graduated colleague dentists.

## What's the most important advice you can give to dental students?

Commit to learning, be humble, give yourself grace, and be prepared for your clinical sessions. Life is fast-paced, and there is so much pressure to be the best. Social media doesn't show the struggle with the learning process, so students often feel an increased pressure to perform and leave an impression that things come naturally to them. Learning takes time, and you will have years to grow your skills and talents.

## What do you think will most transform dentistry in the next few years?

Artificial intelligence (AI) and generative AI will transform many aspects of the dental profession. It already has made strides in the diagnostics field, allowing us to improve the way we diagnose diseases as well as monitor outcomes. It will change the way we manage the business of dentistry and how we communicate with our patients. As educators, we must embrace innovations in AI and lead our institutions to explore ways of incorporating them within dental education and patient care services. **MD**



Qoot Alkhubaizi, UMSOD assistant dean of clinical affairs, guides students in the clinic.

Photo by Holly Selby



# Lasting Impressions

## Laurels

*In celebration of faculty accomplishments*



Mary Beth  
Aichelmann-Reidy

**Mary Beth Aichelmann-Reidy, DDS**, division chief and clinical associate professor, Department of Periodontics, and associate director, Postgraduate Periodontics Program; **Kuei-Ling C. Hsu, DDS, MS**, clinical associate professor and research director, Department of Orthodontics and Pediatric Dentistry; and **Hwan Hee Park, DDS**, clinical assistant professor, Department of Advanced Oral Sciences and Therapeutics, led a discussion titled “HER Specialty Panel — Fitting the Mold or Breaking It? Women’s Journeys Across Dental Specialties” at the American Association of Women Dentists Conference held in Baltimore in September.



Kuei-Ling C. Hsu



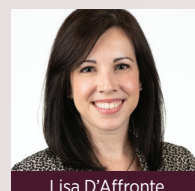
Hwan Hee Park



**Yvette Alania, DDS, PhD, MS**, clinical assistant professor, Division of Cariology and Operative Dentistry, was among the co-authors of “Structure-Activity Relationships of A- and B-Type Proanthocyanidins in Long-Term Dentin Biomodification and Biocompatibility,” which was published in the *Journal of Dental Education* in October, and “Advanced Biomechanics and Stability of the Resin-Dentin Complex Via Modular A- and B-Type Proanthocyanidins,” which was published in *Biomaterials* in September.



**Jose A. Bosio, BDS, MS**, Alumni & Friends Endowed Clinical Associate Professor, division chief and orthodontic program director, Division of Orthodontics, presented “Virtual Clear Aligner Attachment Removal for Retainer/ Aligner Fabrication Prior to Completing Orthodontic Treatment” at the 10th International Orthodontic Congress, which was sponsored by the World Federation of Orthodontists and held Oct. 22-25 in Rio de Janeiro.



Lisa D'Affronte

**Lisa D'Affronte, DDS**, clinical assistant professor and director, Division of General Practice, and **Lisa Bress, RDH, MS**, chief and clinical associate professor, Division of Dental Hygiene, received a \$25,000 seed grant from the UMB Center for Interprofessional Education for “Accessing Dental Care Services for UMB’s Neighbors Through an Interprofessional Team-Based Approach.”



Lisa Bress



**Joyce Da Silva, PhD**, assistant professor, Department of Neural and Pain Sciences, was invited to speak at the 57th Congress of Pharmacology and Experimental Therapeutics, which was held Brazil in October. She also participated in the “Meet the Expert” session, engaging with trainees and early career scientists.



**Stephanie Dennison, DDS**, clinical assistant professor, Division of General Practice, was featured in the article “Sleep Apnea Knowledge Gaps,” which was published by *MedPage Today* in November.



**Nileshkumar Dubey, BDS, PhD**, clinical assistant professor, Department of Comprehensive Dentistry, joined the *Journal of Translational Medicine* in the role of associate editor for the regenerative medicine section. He was also invited to serve on the editorial boards of *Scientific Reports* and the *International Journal of Bioprinting*.

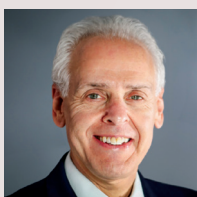


Hanping Feng

**Hanping Feng, PhD**, professor and vice chair, and **Yongrong Zhang, PhD**, research assistant professor, both in the Department of Microbial Pathogenesis, received a five-year, \$3.48 million National Institutes of Health grant to support the development of a novel probiotic yeast- and single-domain antibody-based immunotherapy to prevent the transmission of *Clostridioides difficile*.



Yongrong Zhang



**Steven M. Siegel, DMD**, part-time clinical assistant professor, was elected president of the American Association of Orthodontists.



**Ahmed Sultan, BDS, PhD**, assistant professor and director, Advanced Program in Oral Maxillofacial Pathology, Division of Artificial Intelligence Research, Department of Oncology and Diagnostic Sciences, wrote “AI-Generated Podcasts for Health Education,” which was published in *Medical Teacher* in July. He also was a guest speaker at the 2025 session of the International Association for Dental Research held in Barcelona, Spain. Presented June 28, his talk was titled “Redefining an Ideal AI Ground Truth for Digital Oral Pathology.”



**Hanae Saito, DDS, MS, CRC**, clinical associate professor and director, Predoctoral Periodontics and Prosthodontics, Department of Oral Advanced Sciences and Therapeutics, was among experts who offered a webinar linking bench-side investigations with clinical strategies to improve outcomes in implant dentistry. Titled “Peri-Implant Interfaces — From Laboratory Models to Clinical Design Strategies,” the webinar was offered July 17 by the International Association for Dental, Oral, and Craniofacial Research.



Manindra Nath Tiwari



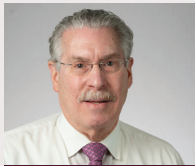
Man-Kyo Chung

**Manindra Nath Tiwari, PhD**, research associate; **Man-Kyo Chung, DMD, PhD**, professor; **Fernando da Silva Fiorin, PhD**, postdoctoral fellow; and **Lauren Paik**, summer trainee, all in the Department of Neural and Pain Sciences, co-authored “Sex Differences of Synaptic Plasticity and Microglial Remodeling in the Dorsal Hippocampus Following Trigeminal Nerve Injury In Mice,” which was published in *Neurobiology of Disease* in October.



**Darien Weatherspoon, DDS, MPH**, assistant professor, Department of Dental Public Health, was the lead author of “Oral Health Care Use Characteristics in a Limited Sample of Medicare Advantage Beneficiaries, Medicare Advantage Encounter Data 2021,” which was published in the *Journal of the American Dental Association*.

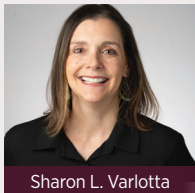




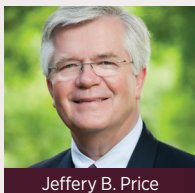
John K. Brooks



Azin Parsa



Sharon L. Varlotta



Jeffery B. Price



Sylvan Feldman

## Cover Story

**John K. Brooks, DDS; Azin Parsa, DDS, MSc, MS, PhD; Sharon L. Varlotta, RDH, MS; Jeffery B. Price, DDS, MS; and Sylvan Feldman, DDS, MLA**, all faculty members, and **Rewa O. Hazim**, student, co-authored “Diffuse Idiopathic Skeletal Hyperostosis (DISH): Incidental Radiologic Finding in an Older Adult,” which was published and featured in March on the cover of *Quintessence International*.

DISH is a health condition in which extra bone growths form along the front of the vertebrae, creating stiff, interconnected areas. Although not common, the condition can be linked with other health problems, particularly with the metabolic syndrome (type 2 diabetes mellitus, hypertension, dyslipidemia, obesity, and elevated body mass index) and an increased risk for choking. This report described a case study of an 87-year-old, asymptomatic male patient and concluded that dental clinicians be watchful to possible signs of DISH. If the condition is suspected, the patient should be referred for a full medical exam.



## Spotlight on UMSOD Researcher

**Marcela Romero-Reyes, DDS, PhD**, clinical professor, Department of Neural and Pain Sciences, and director, Brotman Facial Pain Clinic, presented the lecture “A New Target for the Management of Trigeminal Neuropathic Pain” at the

American Headache Society’s annual scientific meeting in June in Minneapolis. She also presented the paper “Optimizing Combined Treatment for Migraine and Temporomandibular Disorders (TMDs)” at the annual International Headache Congress held in September in Sao Paulo, Brazil. The paper was one of seven chosen from those presented at the meeting to be published in *Cephalalgia*, the official journal of the International Headache Society. Romero-Reyes also was interviewed by *NeurologyLive* about her preliminary preclinical data that supports the adenosine A3 receptor (A3AR) as a promising and potentially safe therapeutic target for managing trigeminal neuropathic pain.



Flavio Copello, DDS, MS, PhD, and Sydney Gladfelter, DDS

## Researchers Test New Method to Attach Braces to Protect Tooth Enamel

For decades, orthodontists have relied on a tried-and-true process to attach braces. They etch tooth enamel with a weak acid solution, then bond metal brackets to the roughened surface. The process is effective but can contribute to permanent white spots or weakened enamel in some patients.

Flavio Copello, DDS, MS, PhD, clinical assistant professor, and orthodontic resident Sydney Gladfelter, DDS, launched a clinical trial Aug. 11 to test whether a new adhesive can attach brackets just as effectively and with fewer potential risks.

The new adhesive is designed to bond directly to enamel without acid treatment. It also promises faster bracket placement and better resistance to saliva contamination. The 20 patients in the yearlong study will experience both approaches. One side of each patient’s mouth will receive brackets bonded with the new ORMCO etch-free material, while the other side gets the current gold standard treatment using Transbond XT adhesive with acid etching.

The split-mouth design allows researchers to directly compare how well each method works under identical conditions in the same patient. “The results will provide clinicians with evidence on whether this new material offers practical advantages in everyday orthodontic practice,” Copello said. **MD**

— LAURA LEE

# Innovation + Discovery



**LEFT TO RIGHT, FRONT ROW:** Collaborating researchers Jin Ro, professor, and Joyce Da Silva, assistant professor, both of the Department of Neural and Pain Sciences, pose in the green light room used for therapy exposure with members of their team. **LEFT TO RIGHT, BACK ROW:** Renan F. do Espírito Santo, PhD, instructor; Michael Keaser, senior research analyst; and Laura Ventura, graduate research assistant

## UMSOD Researcher Receives \$4.1M in Grants

### NIH Funds Will Be Used to Study Green Light Therapy for Pain and Anxiety and Personalized Strategies for Treating Alcohol Use Disorder

BY HOLLY SELBY

**J**oyce Da Silva, PhD, assistant professor, Department of Neural and Pain Sciences (NPS), received a five-year, \$3.7 million grant from the National Institutes of Health (NIH) to investigate how green light therapy may relieve chronic pain and anxiety.

The innovative project will be the first to map how the entire brain changes as chronic pain develops — and as green light therapy is applied. Da Silva's team, including co-investigator Jin Ro, PhD, MA, professor, NPS, aims to answer the question: Can green light reverse, or even prevent, the brain changes caused by chronic pain and anxiety?

More than 60 million American adults experience chronic pain, and around 50 million suffer from anxiety disorders each year. Chronic pain and pain that often restricts daily activities of life or work are the most common reasons adults seek medical care,

according to the Centers for Disease Control and Prevention. Additionally, the conditions are associated with decreased quality of life, misuse of opioids, and increased anxiety and depression.

“By uncovering the neural mechanisms behind this promising non-pharmacological therapy, our research has the potential to open new avenues for safe and effective treatments for millions living with these debilitating and often co-occurring conditions,” Da Silva said.

Da Silva also received a second award: a four-year, \$402,000 NIH grant in collaboration with the University of California, San Diego to investigate brain differences associated with individual vulnerability to alcohol use disorder. By integrating preclinical and clinically relevant approaches, this research could help pave the way for more personalized strategies to prevent and treat alcohol use disorder and

reduce its impact on public health.

Da Silva earned her PhD in neuroscience from the University of Sao Paulo in Brazil. While in her PhD program, she also finished a residency in pain management. She completed a one-year international PhD internship at the University of Maryland Baltimore (UMB), followed by a joint postdoctoral fellowship at UMB and Johns Hopkins University where she studied brain mechanisms underlying sex and age differences in chronic pain in humans and animal models.

“By investigating brain mechanisms related to sex and age differences in chronic pain conditions in rodents and humans, as well as pharmacological and non-pharmacological treatments that could potentially reverse changes induced by pain and emotional comorbidities, we hope to develop novel insights for personalized therapy,” she said. **MD**



# Battling Pain with Precision and Partnership

## UMSOD's Richard Traub Leads the Fight Against Chronic Pain

BY HOLLY SELBY



Richard Traub

In the world of chronic pain research, Richard J. Traub, PhD, stands out for his impact and collaborative approach.

As professor and chair of the Department of Neural and Pain Sciences at the University of Maryland School of Dentistry (UMSOD), Traub has spent decades unraveling the mysteries

of visceral pain. His pioneering work over the last 15 years is reshaping how scientists understand — and potentially treat — chronic overlapping pain conditions (COPCs), a group of disorders, including temporomandibular disorder (TMD), irritable bowel syndrome (IBS), fibromyalgia, and migraine headache, that often coexist, are more prevalent in women, and defy conventional treatment.

Since 2012, Traub has secured four National Institutes of Health grants to study COPCs and cultivated a web of collaborations across the University System of Maryland and beyond. His latest accolade, a 2025 MPower Professorship, awarded by the University of Maryland Strategic Partnership: *MPowering the State*, celebrates his innovation, scientific leadership, and collaborative work that extends from Baltimore to the University of Maryland, College Park (UMCP).

“Why multiple chronic pain conditions co-occur is not well understood, and our studies are meant to bridge the gap between patients having COPCs, why they have these multiple conditions, and how to treat them,” Traub said.

### A New Lens on Complex Pain

COPCs such as TMD and IBS affect millions of patients. Stress exacerbates these conditions, and more than half of patients report experiencing multiple disorders simultaneously. The clinical challenge? Treating one painful condition can inadvertently worsen another.

Traub's breakthrough came in the form of a novel animal model that simulates this complexity in rats. His research shows how stress, when combined with orofacial pain, can trigger persistent gastrointestinal hypersensitivity — mirroring the dual pain experience of TMD and IBS sufferers. It was the first animal model of its kind.

Now, Traub and his colleagues are pushing the boundaries further. Initially, they endeavored to identify biomarkers in the colon that reveal the mechanisms behind chronic visceral pain. The implications are profound — targeted therapies that respond dynamically to pain signals could

revolutionize treatment. They subsequently determined that the brain is as, if not more important, to understanding the mechanisms underlying chronic pain. Expanding on the approach they used to study the colon, they are now focused on determining how the brain contributes to chronic pain.

“Dr. Traub is an inventive and collaborative faculty leader and mentor,” said Mark A. Reynolds, DDS, PhD, dean of UMSOD. “His model has enabled research teams at UMB and UMCP to explore chronic overlapping pain conditions, which have long been poorly understood. His work is improving lives.”

### The Power of Partnership

Traub's research thrives on interdisciplinary collaboration. His partners include Robert K. Ernst, PhD, and Alison Scott, PhD, of UMSOD's Department of Microbial Pathogenesis; Joyce Da Silva, PhD, and Ohannes Melemedjian, PhD, in Traub's department; and Pamela Abshire, PhD, MS; Behtash Babadi, PhD, MSc; and Reza Ghodssi, PhD, MS, of UMCP's Department of Electrical and Computer Engineering.

“These collaborations, developed over years, have allowed us to explore mechanisms that contribute to comorbid pain conditions, identify novel targets for therapeutic intervention, and are essential to our success,” Traub said.

Together, they've generated behavioral, functional magnetic resonance imaging and mass spectrometry imaging datasets from colon and brain tissue of both control rats and those with chronic TMD-like and IBS-like pain. Using AI and machine learning, UMCP researchers achieved more than 87 percent accuracy in distinguishing chronic pain from control samples in the colon dataset — a leap forward in diagnostics. Their vision includes developing sensors that monitor and identify pain in real time, potentially guiding the development of new pain-relieving drugs.

### Modeling the Future

This fusion of neurobiology, engineering, and data science is more than academic — it's also an innovative model for how modern research can work. UMSOD brings deep expertise in pain mechanisms and biological imaging, while UMCP contributes cutting-edge sensor design and computational analysis. Next steps will include refining biomarker identification and clarifying the brain's circuitry to better understand mechanisms that contribute to chronic visceral pain, Traub said. **M**

*“Dr. Morgan teaches with a rare combination of clarity, structure, and empathy.”*

*“She not only wants us to succeed, she also sets the foundation for us to become compassionate, competent clinicians, and she works tirelessly to ensure that we get there.”*

— JADE WEATHERINGTON,  
FOURTH-YEAR DENTAL STUDENT



**TOP:** Andrea Morgan, UMB's 2025 Founders Week Educator of the Year

**BOTTOM:** Mark A. Reynolds, UMSOD dean; Andrea Morgan; and Bruce E. Jarrell, UMB president, at UMB's Awards Recognition and Reception on Oct. 23



# UMSOD's Morgan Wins UMB Educator of the Year Award

## Faculty Member Recognized for Supporting Students Throughout Their Academic Journey

STORY BY LOU CORTINA  
PHOTOS BY MATTHEW  
D'AGOSTINO / UMB

If there is one constant presence during a student's academic journey at the University of Maryland School of Dentistry (UMSOD), it's Andrea Morgan, DDS, MS.

As a clinical assistant professor, director of student advocacy and cultural affairs, and director of student recruitment, Morgan is with students from start to finish, helping them to become not only oral health professionals, but also well-rounded practitioners who deliver attentive care to their patients.

"Dr. Morgan teaches with a rare combination of clarity, structure, and empathy," said Jade Weatherington, a fourth-year UMSOD student and 2024-25 president of the School's Student National Dental Association (SNDA) chapter. "She incorporates visual aids, hands-on tools, and innovative techniques that make even the most complex material feel accessible and memorable.

"But more than her methods, it is the intention behind her teaching that sets her apart," Weatherington added. "Dr. Morgan not only wants us to succeed, she also sets the foundation for us to become compassionate, competent clinicians, and she works tirelessly to ensure that we get there."

These traits have helped Morgan make an indelible impact at UMSOD and are among the reasons she was chosen as the University of Maryland, Baltimore's (UMB) 2025 Founders Week Educator of the Year.



Upon learning of her award, Morgan said she immediately thought of her mother, who was an elementary school teacher.

“My teaching career is a tribute to her,” she said. “Growing up, I watched her give of herself to her students. She spent many evenings and weekends preparing lesson plans and grading papers with no complaints, which was her job and her passion. The thing I remember most is how she ‘took care’ of her students in big and small ways. This award honors all the work she demonstrated to me.”

As course director for Dental Anatomy, Morgan teaches the first course that dental students encounter. She works closely with students to identify areas for growth and helps them develop the skills and strategies they need to succeed academically.

“The class is challenging and, for some students, it is the first time they are thinking of the ‘art’ of dentistry,” Morgan said. “For those of us that are not naturally artistic, it is a challenge. But the growth that I am able to see during their first years as students perfect their hand skills is exciting for me as one of their instructors.”

As director of student advocacy and cultural affairs and director of student recruitment, she is a trusted mentor and advocate. Morgan pairs students with faculty or peer mentors, provides academic support and guidance for students taking the National Board Dental Examination, and helps

students access a range of on-campus services.

“Dr. Morgan is known for her commitment to excellence, high standards, and instructive feedback,” said UMSOD Dean Mark A. Reynolds, DDS, PhD, who nominated Morgan for the Educator of the Year Award. “She meets students where they are, working closely with them to identify areas for growth and helping them develop the skills and strategies they need to succeed in their coursework. Her classroom is a place where students feel both challenged and supported — a balance that reflects her deep commitment to their long-term success.”

## Success with SNDA

Morgan is the faculty advisor to UMSOD’s SNDA chapter, which promotes and supports dental students from underrepresented groups. The chapter has received first or second place in the SNDA Chapter of the Year competition (large chapter category) for 13 years, recognizing its fundraising, public service, and outreach efforts aimed at encouraging high school and undergraduate students in underrepresented populations to pursue oral health careers. In 2024, the chapter was honored with a UMB Rev. Dr. Martin Luther King Jr. Diversity Recognition Award for outstanding student group.

“I am proud of the awards that our students, especially the SNDA group, have amassed over the years,” Morgan said. “I am proud that I’ve helped to create an atmosphere for the group where the students both work hard and do important things for the community, which is very exciting.”

Weatherington said Morgan plays an essential role in supporting the mission of UMSOD’s SNDA chapter.

“Dr. Morgan is a committed advocate for equity in dental education,” Weatherington said. “She is deeply involved



*“Dr. Morgan is known for her commitment to excellence, high standards, and instructive feedback. Her classroom is a place where students feel both challenged and supported — a balance that reflects her deep commitment to their long-term success.”*

— MARK A. REYNOLDS, UMSOD DEAN



in our projects, from community outreach to mentorship and educational initiatives. Notably, she has supported our Impressions Day program, which introduces pre-dental students across the country to the profession of dentistry and UMSOD's core values."

Morgan also has served on UMB's Diversity Advisory Council in various capacities, including chair of its Education and Awareness Committee. Her work has been recognized with numerous honors, including UMSOD's Russell Gigliotti Award for Excellence in Teaching (twice) and induction into the International College of Dentists, the oldest and largest international dental honor society.

## Staying Connected

Asked what she likes most about teaching, Morgan said, "I love when I see the light bulb go off in the eyes of a first-year student when I am explaining a dental concept. Then in the clinic, I get to witness students transition into caring and competent dental professionals as they provide care to their patients.

"Also, thanks to social media, I've been able to stay connected with many alumni. So, when I attend conferences, I can reconnect with the alums and see how their lives are going, both personally and professionally. I always feel like a proud parent to see the wonderful things the alums are accomplishing in their lives."

In his nomination, Reynolds noted that Morgan often goes above and beyond to support UMSOD students, pointing out that she once personally transported a student with a knee injury from their residence to the UMSOD building.

"Dr. Morgan ensured that the student's education continued without interruption," Reynolds said. "This is just one of many instances where Dr. Morgan ensured that no student feels left behind." **MD**



**LEFT TO RIGHT:** David Annan, DDS Class of '26; Kennedy Moody, DDS Class of '27; Cheyenne Cannady, DDS Class of '27; Jade Weatherington, DDS Class of '26; Meghan Alexis, DDS Class of '26; and Justin Maduka, DDS Class of '26, at the SNDA Awards ceremony held in July in Kansas City, Mo.

## SNDA Garners National Recognition

The University of Maryland School of Dentistry's (UMSOD) Student National Dental Association (SNDA) received a top national award in recognition of its fundraising, community service work, mentorship, and outreach aimed at encouraging youths from underrepresented communities to pursue careers in oral health. The honor was presented at the 2025 SNDA National Conference, which took place July 11-14 in Kansas City, Mo.

The UMSOD chapter was selected for the SNDA's 2025 Chapter of the Year Award in the category of large chapters for its outstanding outreach programs and events held throughout the year. The UMSOD group has received numerous honors in preceding years for its long-term community engagement efforts, leadership, and the supportive dynamic it creates within the school.

"This year's award represents another outstanding achievement and is a true testament to the phenomenal leadership and dedication of our SNDA students," said Kate Noonan, PhD, MEd, UMSOD's assistant dean of student affairs.

Noting that mentorship was central to the chapter's mission, Jade Weatherington, DDS Class of 2026, said that one of her goals as the 2024-25 president was fostering a robust student organization that served as a resource for students. "That meant creating a supportive academic and social environment for our members, while also advocating for diversity and inclusion within the profession," she said.

The group's initiatives and programs included welcoming pre-dental students from across the country at UMSOD's Impressions Day; participating in Lessons in a Lunchbox, a program that educates elementary school children about the importance of oral health care; and conducting voter registration drives at a variety of community outreach events.

Weatherington is particularly proud of the chapter's participation in Patients Day, a daylong event held annually by the University of Maryland School of Pharmacy as part of a larger program aimed at eliminating health inequities faced by underserved populations and improving public health. SNDA members provided community participants with oral health screenings and hygiene information.

"Winning was rewarding because it validated the hard work of our members, but more than that, it was a reflection of teamwork," said Weatherington. "Every event, every screening, every mentorship conversation was built by students working together with passion and purpose." **M**

— HOLLY SELBY





# HIDDEN DANGERS

## *at Dentist's Office for Tick Bite Allergy*

BY LAURA LEE

**J**eff Clayton knew he was having a medical emergency. The spring day in 2022 had started normally — including one of his favorite meals, a pit beef sandwich — but within hours, he was in the emergency room with a severe allergic reaction that included loss of consciousness and difficulty breathing.

It was his third mysterious allergic reaction in two months, each one following a meal containing beef. What Clayton didn't know was that a tick bite had changed his life forever.

"It has changed my relationship with food greatly," said Clayton, who was diagnosed that July with alpha-gal syndrome (AGS) — also known as red meat allergy or tick bite meat allergy. "Gone are the carefree days of ordering whatever I want in a restaurant and eating anything at parties."

Clayton's experience reflects a growing health concern that has caught the attention of John Brooks, DDS, clinical professor in the Department of Oncology and Diagnostic Sciences at the University of Maryland School of Dentistry (UMSOD), whose groundbreaking study published in the May 2025 edition of *The Journal of the American Dental Association (JADA)* warns that routine dental care could pose hidden dangers for patients like Clayton.

## ALPHA-GAL SYNDROME

Alpha-gal syndrome develops after being bitten by a lone star tick, whose saliva contains a complex sugar called galactose-1,3-galactose. This exposure sensitizes the immune system, causing allergic reactions — ranging from hives to life-threatening anaphylaxis — when patients later come in contact with red meat, dairy products, or medical and dental products containing similar compounds.

According to the Centers for Disease Control and Prevention (CDC), more than 110,000 suspected cases have been identified in the United States since 2010, with the numbers rising rapidly. The CDC reports that from 2017 to 2022 alone, more than 90,000 cases were documented.

The condition affects all age groups, with an average diagnosis age of 48. While lone star ticks are most common in southeastern and south-central states, cases have been reported nationwide, the CDC notes.

## PATIENT'S STORY SPARKS RESEARCH

Brooks' interest in alpha-gal syndrome began in the UMSOD Undergraduate Dental Clinic around 2022. A woman seeking routine dental care mentioned her AGS diagnosis, explaining how it had complicated her daily life.

"I had never heard of that condition before, and the patient was very gracious to explain what it was," said Brooks, who says he is intrigued by emerging threats in health care.

The patient's medical history was long and complex. Thirty-two years earlier, she had experienced an almost immediate "feeling of liquid fire in her body" and itching after receiving local anesthetic injections containing paraben, Brooks wrote in the *JADA* article. Seven years before meeting Brooks, she had developed severe itching after a flu shot that required a month of antihistamine treatment.

Most concerning was her alpha-gal diagnosis. Lab testing revealed elevated alpha-gal antibody levels, and an allergist had diagnosed class I alpha-gal syndrome, likely caused by tick bites she received while living in a heavily wooded area.


But it was her dental-related experience that would drive Brooks' research. Five years before their meeting, the woman was being treated for a dental abscess and was prescribed doxycycline in gelatin capsules by a private-practice dentist. Within 12 hours of taking the second dose, she developed an "itchy" throat and swelling of her throat and tongue.

"She telephoned the Robert Wood Johnson Research Foundation in Princeton, N.J., and discovered that the doxycycline gelatin capsules were composed of animal-based gelatin," Brooks explained in the published case report.


The patient didn't return to the UMSOD clinic for about two years. When a dental student resumed her care and approached Brooks for consultation, his curiosity was reignited.

### When a tick bite causes red meat allergy

**Alpha-Gal Syndrome (AGS)**



**AGS is a serious, potentially life-threatening allergy to alpha-gal. AGS is caused by the bite of a lone star tick.**



"That's when I started thinking about this condition again," Brooks said. He realized that while there was documentation about AGS in medical journals, dental literature was silent on the syndrome.

"There's essentially zero information in the dental literature on the topic, and I began mulling around the idea of preparing a manuscript so that the dental community would learn about it," Brooks said.



**"There's essentially zero information in the dental literature on the topic, and I began mulling around the idea of preparing a manuscript so that the dental community would learn about it."**

— JOHN BROOKS, CLINICAL PROFESSOR, UMSOD'S DEPARTMENT OF ONCOLOGY AND DIAGNOSTIC SCIENCES



## HIDDEN DANGERS IN DENTAL CARE

Brooks and his research team, including Ellie Hoch, DDS Class of 2028, and her sister Naomi Hoch, DDS '25, and colleague Ahmed Sultan, BDS, PhD, assistant professor in oncology and diagnostic sciences, conducted an extensive investigation of dental products. They scoured the internet for ingredient lists on vendor sites, reviewed material safety data sheets, and even visited drugstores to photograph product ingredients.

Their findings, published in a comprehensive literature review and case report titled “Alpha-Gal Syndrome: Potential for a Hypersensitivity Reaction After the Use of Dental Products,” revealed that common dental products could trigger life-threatening reactions, including hemostatic agents used to control bleeding during oral surgery, certain toothpastes and mouthwashes, bone graft materials, collagen-based dermal fillers, some suture materials, and medications in gelatin capsules.

The research uncovered five documented cases of alpha-gal reactions related to dental procedures — four involving hemostatic agents and one involving gelatin capsules. All patients required emergency treatment.

For Clayton, who is not a patient of Brooks, this research hits close to home. “Yes, most definitely!” he said when asked if he had considered that dental visits could trigger symptoms. “I had a root canal last year and discussed AGS with the endodontist to ensure that nothing used for the procedure could trigger an allergic reaction.”

## LIVING WITH ALPHA-GAL

Clayton's daily life now requires constant vigilance. “I no longer consume products containing dairy, beef, pork, lamb, etc., and try to focus on eating a more seafood and plant-based diet,” he said. “Now, I ask questions, read labels thoroughly — even medicines — and never leave home without an EpiPen.”

Brooks' patient faces similar challenges. Despite strictly avoiding foods and products that could trigger an episode, she continues to experience occasional breakthrough allergic reactions.

According to the CDC, at least 90 percent of patients with AGS have allergic reactions to red meat, and nearly 52 percent of those who develop reactions progress to anaphylaxis. Reactions typically occur three to eight hours after exposure, making the connection between trigger and symptoms difficult to identify initially.

“You have to become an almost neurotic person reading every single product you ever want to consider using so that you don't promote another alpha-gal reaction,” Brooks said.

## PREVENTION AND PROTECTION

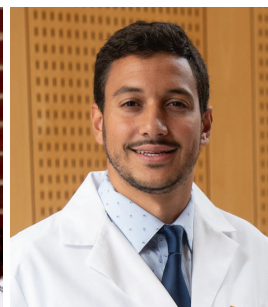
The CDC emphasizes that prevention focuses on avoiding tick bites. When spending time outdoors, especially in wooded or grassy areas, the agency recommends using EPA-approved insect repellents, wearing long sleeves and pants,



Ellie Hoch



Naomi Hoch



Ahmed Sultan

**“If a patient admits they have alpha-gal, that's the red flag. You need to know about your patient's health so that you can seamlessly move forward.”**

— JOHN BROOKS, CLINICAL PROFESSOR, UMSOD'S DEPARTMENT OF ONCOLOGY AND DIAGNOSTIC SCIENCES

and doing thorough tick checks after outdoor activities.

If you find a tick attached to your skin, the CDC advises removing it promptly with fine-tipped tweezers, grasping the tick as close to the skin as possible, and pulling upward with steady pressure. Clean the bite area and your hands with rubbing alcohol or soap and water and monitor for symptoms of tick-borne illnesses.

## KNOWLEDGE IS KEY

Brooks stresses that awareness is the first line of defense. Dental providers must learn to identify at-risk patients by taking thorough medical histories and asking specific questions about food allergies and tick exposures.

“If a patient admits they have alpha-gal, that's the red flag,” he said. “You need to know about your patient's health so that you can seamlessly move forward.”

He recommends that providers consult with patients' allergists before treatment, carefully review all dental products for problematic ingredients, and maintain emergency protocols for severe reactions. For patients with AGS, he advises reading all ingredient labels, working with compounding pharmacies for safer drug alternatives, and carrying emergency epinephrine.

As tick populations expand across the United States and alpha-gal cases multiply, Brooks' research represents more than an academic exercise — it's a critical wake-up call for an entire profession.

For the growing number of Americans living with alpha-gal syndrome, the research offers something invaluable: the knowledge that health care providers are gaining awareness about AGS in order to care for them safely and effectively. And, as Brooks concluded, “Knowledge is power” for the patient and the provider. **MD**

# BEYOND the Smile

UMSOD Clinician-Scientist Explores How  
Dental Visits Can Improve Overall Health

Vivek Thumbigere-Math, assistant professor, Division of Periodontics,  
works in the lab with Jeba Mercy Gnanasekaran, PhD, postdoctoral fellow.







As a clinician-scientist, Vivek Thumbigere-Math treats patients in the clinic, where he is able to identify real-world questions for investigation in the lab.

STORY BY HOLLY SELBY

PHOTOS BY MATTHEW D'AGOSTINO / UMB

**W**hen most people picture a dental visit, they think of cleanings, fillings, or perhaps a gentle reminder to floss more often. But for Vivek Thumbigere-Math, BDS, PhD, assistant professor in the Division of Periodontics at the University of Maryland School of Dentistry (UMSOD), dental visits are much more than that: They represent a front line for improving overall health.

Backed by two new grants from the National Institutes of Health (NIH) totaling nearly \$4.3 million, Thumbigere-Math is exploring how oral health connects to the rest of the body — and why what happens in the mouth can worsen diseases in the other parts of the body.



Vivek Thumbigere-Math, assistant professor, Division of Periodontics, oversees Niyant Ganesh, pre-dental student, in the lab.

*“Dentists and gastroenterologists often treat the same patients, but in separate clinics. Our goal is to bridge that gap — to uncover the oral-gut connection and translate our findings into better care.”*

## Gum Disease and the Gut

Thumbigere-Math’s primary grant, totaling about \$3.85 million, supports groundbreaking research into whether bacteria from the mouth can travel to the gut and trigger inflammatory bowel disease. The disease, which includes Crohn’s disease and ulcerative colitis, affects more than 3 million Americans. It is a lifelong condition marked by debilitating symptoms such as abdominal pain and severe diarrhea, often leading to hospitalization and an increased risk for colorectal cancer.

“Gum disease affects nearly 50 percent of adults and remains the leading cause of tooth loss worldwide,” Thumbigere-Math said. “By tracing how microbes from the mouth can influence distant organs, we are transforming routine dental visits into opportunities to protect whole-body health.”

Early clinical evidence from his group suggests that managing gum disease may improve the gut microbiome and reduce intestinal inflammation. In the clinic, Thumbigere-Math and his team collect saliva, plaque, and tissue samples from patients, working to decode how oral microbes interact with immune cells and gut function.

“Dentists and gastroenterologists often treat the same patients, but in separate clinics. Our goal is to bridge that gap — to uncover the oral-gut connection and translate our findings into better care,” he said.

## Listening to Patients, Following the Science

As both clinician and scientist, Thumbigere-Math moves between patient care and laboratory. He treats patients, spots patterns, and brings real-world problems into the lab. This “bench-to-chairside-and-back” approach allows for a multifaceted investigation of research questions. His team conducts clinical studies designed to assess whether treating periodontal disease measurably improves the gut inflammation and symptoms. They use microbial DNA “fingerprinting” to track whether bacteria move from mouth to gut, and whether their presence in the gut predicts intestinal inflammation or response to dental treatment. In parallel, patient-derived oral bacteria are introduced into animal models to confirm if they can trigger intestinal inflammation.



“We are able to pinpoint the pathways, test new interventions, and then bring the most promising strategies back to the patients who need them,” he said.

## Osteoporosis Drugs and Weakened Roots

The second NIH grant tackles a lesser-known risk: tooth root resorption linked to Denosumab, a widely prescribed osteoporosis drug. While Denosumab helps prevent fractures, it may also inadvertently cause adult tooth roots to deteriorate — leading to tooth mobility and loss.

With 54 million Americans affected by low bone density and more than 26 million women worldwide prescribed Denosumab, even rare side effects can impact thousands, Thumbigere-Math said. “We aim to define who is at risk, why it happens, and how to prevent it — so patients can protect their bones and keep their teeth.”

His team is developing screening tools and biomarkers to identify at-risk patients by using dental imaging, molecular sampling, and animal models to uncover the mechanisms behind root damage.

## A Global Path

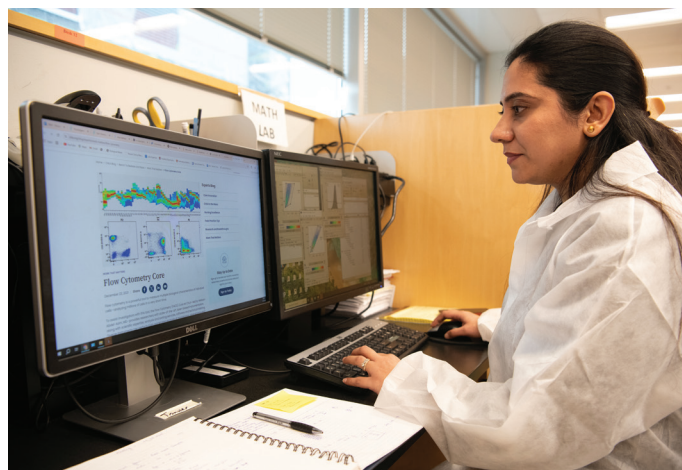
Thumbigere-Math’s journey to UMSOD spans continents. After earning his Bachelor of Dental Surgery degree from Sri Siddhartha Dental College in India, he completed a doctorate and residency in periodontology at the University of Minnesota. Later, he completed a postdoctoral fellowship at the NIH. Today, as a board-certified periodontist and scientist, he embodies the “bench-to-chairside-and-back” approach to accelerating scientific discovery while staying grounded in patient care.

## Powered by Collaboration

“In a challenging funding climate and shifting policy landscape, UMSOD’s diverse patient population, clinical research pipelines, and collaborative atmosphere offer a strategic advantage,” Thumbigere-Math said.

His work is propelled by strategic partnerships with prominent clinicians and scientists at leading institutions including UMSOD, University of Maryland School of Medicine, Johns Hopkins University, University of Minnesota, Virginia Commonwealth University, and University of Turin, Italy.

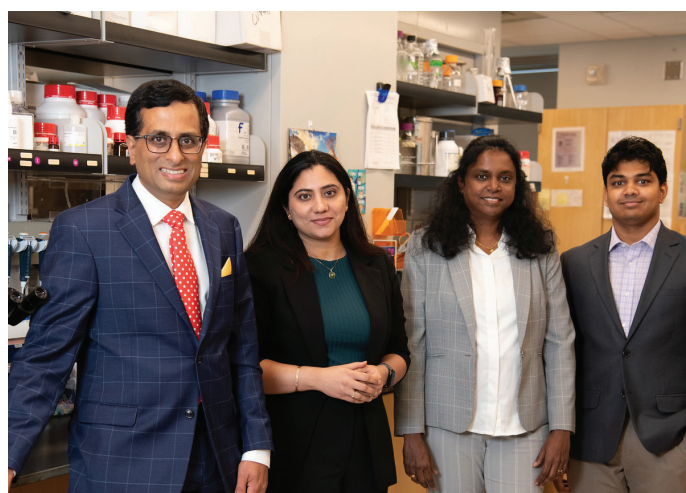
“By working together, we can launch multicenter clinical studies, integrate dental and gastroenterology measurements, and apply advanced microbiome and immune profiling,” Thumbigere-Math said. “Collaboration broadens our reach, sharpens our science, and accelerates the translation of discovery into patient care.” **MD**



Himanshi Tanwar, PhD, postdoctoral fellow, Division of Periodontics, works in the lab.

*“By tracing how microbes from the mouth can influence distant organs, we are transforming routine dental visits into opportunities to protect whole-body health.”*

— VIVEK THUMBIGERE-MATH, ASSISTANT PROFESSOR, DIVISION OF PERIODONTICS



**LEFT TO RIGHT:** Vivek Thumbigere-Math, assistant professor; Himanshi Tanwar, PhD, postdoctoral fellow; Jeba Mercy Gnanasekaran, PhD, postdoctoral fellow; and Niyant Ganesh, pre-dental student, all of the Division of Periodontics

# Alumni

## From the Alumni Association



Dear Fellow Alumni,

As I begin my third and final year as president of the University of Maryland School of Dentistry's (UMSOD) Alumni Association Board of Directors, I feel grateful for the opportunity to serve

my fellow dentists and dental hygienists. I have had the honor of meeting many new people, including students and faculty. Being part of entering students' orientations, White Coat Ceremonies, graduations, All-Alumni Reunions, and other events has filled my calendar and heart with joyful occasions and memories.

Last September, UMSOD alumni and students made a splash when the Chesapeake Dental Conference returned to Ocean City, Md. What a weekend it was! The sound of the surf, the ocean breeze, and the conversations from the 80 alumni who attended UMSOD's cocktail reception made for a memorable evening. Mike Buccino, MA, assistant dean in the Office of Development and Alumni Relations, shared updates about the school and highlighted UMSOD's continued leadership in dental education, clinical innovation, and research. His remarks reminded everyone that, while the skyline of Baltimore might have changed since our student days, the school's dedication to excellence remains unwavering.

Not long after our Ocean City celebration, UMSOD alumni gathered again — this time in Washington, D.C., for a reception at SmileCon, the American Dental Association's (ADA) annual meeting. The event marked a bittersweet milestone: the final SmileCon, bringing an end to an era in

ADA history. UMSOD's reception was filled with warmth, laughter, and pride. The evening's highlight came when Robert Ord, DDS, MD, FACS, Professor Emeritus and immediate past chair, Department of Oral and Maxillofacial Surgery, shared updates on exciting initiatives shaping the school's future. He spoke about projects such as the Ambulatory Surgery Center, which will elevate UMSOD's role as an anchor for dental training and care throughout the region.

Although SmileCon may have closed its final chapter, the energy and enthusiasm at our reception made one thing clear: UMSOD's legacy and alumni community will continue to shine brightly.

Looking ahead, mark your calendars for the 2026 All-Alumni Reunion, which is scheduled for May 29. You won't want to miss it! This year is particularly special for me — it marks my 40th reunion (how did that happen so fast?). Whether it's your fifth, 25th, or 50th, reunions are a wonderful way to celebrate your class' achievements, catch up with old friends, and make new memories. The school is particularly seeking alumni whose graduation years end in 1 or 6 to help organize their class reunions. If you're interested in getting involved, email [dentalalumni@umaryland.edu](mailto:dentalalumni@umaryland.edu). The Alumni Relations team would love to help you make your class celebration a success.

Whether at the oceanfront or in our nation's capital, UMSOD alumni have shown up, reconnected, and celebrated the legacy that began right here in Baltimore. I can't wait to see everyone back "toothgether" again!

**Joanne Block Rief, DDS '86**

*President | Alumni Association Board of Directors*

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## In Memoriam

*We are saddened by the loss of the following alumni, faculty, and friends.*

Walter A. Buchan, DDS '70  
Bernard D. Eisenberg, DDS '55  
Allan Jay Goodfriend, DDS, ENDO '73  
Gerald F. Hoffman, DDS '58  
Capt. Margaret L. Lamy, Ret., DDS '84  
Alfred J. Morini Sr., DDS '44

Mark Rabin, DDS '67  
Martin L. Schroeder, DDS '77  
Albert A. Tysor, DDS '76  
John C. Ulrich, DDS '53  
Neil W. Vanik, DDS '84  
Louis M. Yarmosky, DDS '71

\*The school learned of the passing of these alumni, faculty, and friends between May 5 and Sept. 29, 2025.



# 2025 All-Alumni Reunion

## Making Meaningful Connections, Celebrating Lasting Legacies

BY HOLLY SELBY

The University of Maryland School of Dentistry's (UMSOD) 2025 All-Alumni Reunion kicked off June 13 with the Dr. Harry W.F. Dressel Jr. Memorial Lecture presented by Fotini Anagnostopoulos-King, DMD, clinical assistant professor and general practice director in the Department of General Dentistry. Her topic? "Transcending Impulse and Instinct: Cultivating Frameworks, Moral Courage, and Reflection in Ethical Choices."

The afternoon progressed into evening with a student panel whose members shared insights about the current dental school experience. Their lively presentation was followed by the Alumni Awards Ceremony and Reception, which celebrated this year's honorees:

- **Harold "Hal" L. Crossley**, DDS '80, PhD, MS, Distinguished Achievement Alumni Award
- **James Taneyhill**, DDS '80, MED, Distinguished Public Service Alumni Award
- **Stephanie Dennison**, DDS '15, FAGD, Rising Dental Health Leadership Alumni Award
- **Dana Godbout Laake**, RDH, MS, Linda Devore Dental Hygiene Alumni Award

Noting that UMSOD is steeped in a deeply rich history as the first dental college in the world, Dean Mark A. Reynolds, DDS '86, PhD, said the school's "legacy continues through the leadership and impact of our graduates in oral health care and the communities they serve."

Read more about the Distinguished Alumni at [dental.umaryland.edu/distinguished-alumni](https://dental.umaryland.edu/distinguished-alumni). **MD**

Mark A. Reynolds, UMSOD dean, congratulates James Taneyhill, Distinguished Public Service Alumni Award recipient.



Photos by Elisha Coleman



**LEFT TO RIGHT:** Student panelists Jeremie Oliver Piña, DDS Class of 2026; Alanna Liebman, DDS Class of 2027; Michael Abromovage, DDS Class of 2027; and Saeid Shadmani, DDS Class of 2026, share insights about the current dental school experience with alumni.



**LEFT TO RIGHT:** Distinguished Alumni Award honorees Dana Godbout Laake, Stephanie Dennison, and James Taneyhill were honored at the awards ceremony. Not pictured is Harold "Hal" L. Crossley, who was unable to attend.

Fotini Anagnostopoulos-King, clinical assistant professor and general practice director, Department of General Dentistry, presented the 2025 Dr. Harry W.F. Dressel Jr. Memorial Lecture at the All-Alumni Reunion in June.





UNIVERSITY of MARYLAND  
SCHOOL OF DENTISTRY

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## UMSOD Continuing Education Courses

The University of Maryland School of Dentistry (UMSOD) is committed to lifelong dental education and offers many courses throughout the year that are open to all oral health professionals. Below is a partial listing of the classes scheduled for Spring 2026.

**FOR INFORMATION, CLASS LISTINGS, AND TIMES:**  
Call 410-706-2282 or visit [dental.umaryland.edu/ce](http://dental.umaryland.edu/ce).



- **Combined Inhalation Course (Meets Requirements for Class 1 Permit)**  
Spring 2026, Date TBD, Hybrid Course, UMSOD
- **Local Anesthesia for Dental Hygienists**  
Thursday, Jan. 8-Saturday, Jan. 10 | In Person, UMSOD
- **Comprehensive Blood Glucose Management for Health Care Providers**  
Saturday, Jan. 24 | In Person, UMSOD
- **Advanced Applications of Cone Beam CT in Dental Practice**  
Friday, Feb. 27- Saturday, Feb. 28 | In Person, UMSOD
- **Digital Dentistry from Single Units to All on 4**  
Saturday, March 14 | In Person, UMSOD
- **Optimum Aesthetics**  
Friday, April 17-Saturday, April 18 | In Person, UMSOD

## DON'T MISS: UMSOD IMPLANTOLOGY CONTINUUM COURSE

Two-year, hands-on continuing education program aimed at preparing practicing dentists to perform implants. Beginning August 2026; registration is limited.