

CASE WESTERN RESERVE UNIVERSITY

WINTER 2023 | VOLUME 22 | ISSUE 2

SCHOOL OF DENTAL MEDICINE



DIGITAL DENTISTRY

After 130 years, CWRU remains at the forefront of dental education

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Dean

Kenneth Chance, DDS (DEN '79)
216.368.3266
kenneth.b.chance@case.edu

Associate Dean for Development and Alumni Relations

Carolyn Gordon
carolyn.gordon@case.edu

Editor/Director of Publications

Lauren Marchaza

Contributing Writers/Editors

Emily Mayock
Laura Meyer
Daniel Robison
Carey Skinner Moss

Photography

Roger Mastroianni
Matthew Merchant
Laura Meyer
Dan Milner
Matt Shiffler

Design & Production

Blue Star Design

Send alumni news and death notices to dentalalumni@case.edu

Send comments, inquiries and story ideas to lauren.marchaza@case.edu

On the cover:

Dental students use Microsoft's HoloLens mixed-reality technology to explore a digital cadaver through software developed by Case Western Reserve University's Interactive Commons.

Stronger than ever

To our alumni and friends:

As we emerge from the most challenging public health crisis of our lives, I am incredibly proud to say that the Case Western Reserve University School of Dental Medicine is stronger than ever.

Our school has long been a leader in dentistry, and the latest additions to our classrooms and clinic are perfect examples of innovation in action. In the classroom, we've incorporated Microsoft HoloLens' augmented-reality technology into our curriculum to improve student learning and performance. In the dental clinic, residents use the Yomi Robot to treat patients in need of oral surgery. Learn more about these high-tech tools starting on p. 16.

Over the last three years, we also have made significant efforts to deepen our connections with the Cleveland community. The community dentistry program expanded to serve the LGBT Center of Greater Cleveland, and—with a new grant from FirstEnergy Foundation—the Lifelong Smiles program van is bringing dental care to even more seniors across Northeast Ohio (see p. 20).

Meanwhile, our faculty are leading the way with compelling research funded by the National Institutes of Health. One project aims to improve our understanding of how HIV impacts the human body, while another is intended to reduce oral health disparities among adults with low incomes (see p. 14).

As we look back at the last 130 years of excellence, I am very excited for the School of Dental Medicine's future. We have achieved so much but, in many ways, this is only the beginning.

Thank you all for your hard work, continued dedication and support.

Kenneth B. Chance, DDS (DEN '79)

Dean, Case Western Reserve University School of Dental Medicine



Dean Kenneth Chance

"We have achieved so much but, in many ways, this is only the beginning."

Residents to the rescue

Tragedy averted in the dental clinic waiting room

When Case Western Reserve University School of Dental Medicine's Dental Clinic opened on a chilly morning last March, it was an ordinary day: Patients checked in for their appointments while students and residents attended to their duties and provided care.

But around 3 p.m., that all changed. In the first floor waiting area of the Advanced Education in General Dentistry clinic, a 59-year-old male patient suddenly—and quietly—slumped in his chair. **George Schieder**, then a first-year oral and maxillofacial surgery (OMFS) resident and first-year medical student, noticed the posture of the patient and leapt into action, easing the unresponsive patient gently onto the floor.

"In OMFS, we do a lot of things that make us proud. But saving someone's life definitely tops them all."

— *George Schieder*

"I didn't feel a pulse," said Schieder, "but my heart was pounding so hard that I had Kyle confirm it for me."

Then third-year OMFS resident and fourth-year medical student **Kyle Baird, DDS, MD (MED '22)**, observed the situation and instructed Schieder to retrieve the nearby automated external defibrillator (AED), which can help treat



George Schieder and Kyle Baird

life-threatening cardiac dysrhythmias by delivering a dose of electric current to the heart—a shock necessary for this patient who had no detectable pulse.

Like all School of Dental Medicine clinical students, residents, faculty and staff, Baird had completed biannual basic life support (CPR) training, so he began administering CPR. Schieder then returned with the AED—on which regular training is also required—and ventilated the patient with a bag valve mask, essentially breathing for him while Baird continued the chest compressions to restart the patient's heart.

After applying the AED pads to the patient's chest, Schieder delivered a single shock—enough to restart the patient's heart and keep him stable while the team waited for first responders to arrive and transport the patient to University Hospitals. The patient has since recovered, and is grateful for the valiant efforts of the school's students and staff.

"In OMFS, we do a lot of things that make us proud," said Schieder. "But saving someone's life definitely tops them all." ■

Photo by Jami Meglich

The patient perspective

Student's childhood diagnosis sparks compassion

Jennifer Jung was in the sixth grade when she was diagnosed with a hearing impairment in her right ear—a condition that today reminds the third-year dental student to treat all patients with compassion and special care.

That's only possible, Jung later realized, through careful communication. With this thought in mind, Jung learned American Sign Language as an undergraduate student, opening her

eyes to the many different modes of communication people use.

"Communication is very important to me," said Jung, "and learning how each individual communicates is very important to good patient care."

Jung soon became interested in dentistry with a focus on communication in patient interaction—specifically for its effects on a person's overall health and wellbeing.

"Yes, we deal with chewing, breathing, the health of the physical teeth, but we

also treat the emotional and mental health of a patient," Jung said. "If you aren't confident in your smile, chances are that you are not going to show confidence in other areas of your life."

During her time at Case Western Reserve University, Jung has joined several clubs and organizations such as the Graduate Student Council; Graduate Society of Medical Humanities, of which she is president; and Orthodontics and Craniofacial Orthodontics Club, of which she is co-president.

This engagement has helped Jung expand her network, refine her professional interests, and obtain research opportunities in craniofacial orthodontics, oral and maxillofacial medicine, diagnostic sciences, and interprofessional community health.

"Communication is very important to me, and learning how each individual communicates is very important to good patient care."

— Jennifer Jung

Throughout her academic journey, though, Jung always comes back to what initially attracted her to the field: relating to patients using communication in ways that she, herself, could have benefited from when she was young.

"Providing specialized care," she said, "to those who need it." ■



Photo by Ann Jung

Jennifer Jung

Serve, learn, collaborate

Student volunteers provide care—and get interdisciplinary experience in return

Becky Garner, a third-year student at Case Western Reserve University School of Dental Medicine, had never witnessed such a serious, rare condition.

All signs and symptoms presented by a teenage patient pointed to a severe case of amelogenesis imperfecta, a genetic condition in which the proteins of the tooth enamel malfunction and produce an abnormal formation, or an external layer of teeth.

Upon examination, Garner noticed the patient had been partially treated for the condition but was unaware of a specific diagnosis. The patient's previous dentist—whom the patient said she hadn't seen in some time—reportedly said they no longer felt comfortable providing care because of the patient's condition.

"It put her in a spot where she didn't know where to go," said Garner. "Without dental care and education, she'd be looking at complete tooth loss by the time she's 30."

After the examination, Garner discussed next steps for the patient with a team of students that included a medical and dental preceptor, a social work student and nursing student. They agreed the patient needed a specialist's care, and referred her to providers who could address her needs more comprehensively.

It's just part of the work she and her fellow dental student volunteers do every weekend at Case Western Reserve University's Student-Run Health Clinic (SRHC), which recently moved from its University Circle location to Neighborhood Family Practice on Cleveland's near west side.



Becky Garner

Founded by Case Western Reserve University medical students in 2011, the SRHC brings together professional students from the nursing, social work, dental and medical schools (including Cleveland Clinic Lerner College of Medicine) at Case Western Reserve. Working together under the supervision of credentialed professionals, they provide high-quality, compassionate healthcare to underserved populations within the greater Cleveland community, regardless of their ability to pay.

SRHC volunteers also regularly conduct community outreach, such as speaking at health fairs, repairing and packaging medical devices for use in underserved regions, providing health education at the Cuyahoga County Juvenile Justice Detention Center and vaccinating Clevelanders against COVID-19.

About 50 dental students volunteer to work at the SRHC each semester, easily filling the four available spots each weekend.



Photo by Russell Lee

Volunteers at the Student-Run Health Clinic learn from one another while providing essential healthcare to underserved communities. (Photo taken before COVID-19 pandemic.)

Photo by Russell Lee



A team of students provide care for a patient at the Student-Run Health Clinic in Cleveland. (Photo taken before COVID-19 pandemic.)

"Volunteer positions at the SRHC are very sought after within the dental school," said **Emily Fromknecht**, a third-year dental student and volunteer. "I've applied to volunteer at the clinic since my first year. [This] was my first year that I have had the opportunity."

Working together

The SRHC gives students a clinical setting to learn the skills they will need in their professions and collaborate with students from other disciplines.

"At its core, it's focused on interdisciplinary healthcare," said **Andrea Petrowitz**, third-year dental student and dental director of the SRHC. "From a student perspective, you're all going in with all these other health profession students, and you're all peers on some level."

The students learn from each other how different areas of the body and mind are connected, and how symptoms and conditions can manifest



Andrea Petrowitz

themselves in ways unrelated to their own areas of study.

"The discussions the students have are really important," said Petrowitz. "You get to see how everyone's learning and how, ultimately, we're all working toward this one goal—but it's all connected."

"And," she added, "it teaches you how to be a better clinician."

Fromknecht agreed, noting that, in the interprofessional environment, she "learned how to communicate with other healthcare professionals to effectively provide patients with the care they need." ■

EXPANDING SERVICES

The Student-Run Health Clinic recently received a grant from the Greater Cleveland Dental Society to increase the number of dental outreach programs and expand dental services of the Saturday clinic. Efforts to achieve both goals are underway.

Celebrating students

Two ceremonies mark milestones, award recognition

At Case Western Reserve University School of Dental Medicine, student traditions are important, especially two held toward the start of the academic year: the White Coat Ceremony and Professionals Day.

Donning the white coat

In August, first-year Doctor of Dental Medicine students entered Amasa Stone Chapel on Case Western Reserve's campus with the understanding that they were about to make one of the most important transitions in their lives.

During the White Coat Ceremony, students accept their white coats

to show they have completed their preclinical studies and are ready to begin caring for patients. As Dean **Kenneth Chance, DDS (DEN '79)**, said in his opening remarks, "Receiving your white coat is a sign of honor for your hard work, as well as your acceptance of the new responsibilities you will carry as healthcare providers."

Alumni Board President **Kari Cunningham, DMD (DEN '10)**, Associate Dean for Admissions and Student Affairs **Kristin Williams, DDS (DEN '89; GRS '05, public health)**, Vice Dean **Dale Baur, DDS (DEN '80)** and Associate Dean for Clinical Affairs **Manish Valiathan, DDS (DEN '99, '02)**, also presented remarks, while Associate Dean for Academic Affairs **David Rolf, DMD**, delivered the keynote address.



First-year dental students recited the professional oath during the White Coat Ceremony in August.

Each member of the Class of 2026 accepted their white coats with pride, posed for a picture and—in unison—recited their professional oath to uphold the highest standards in dentistry.



Photos by Laura Meyer

The Class of 2026 gathered at the Amasa Stone Chapel on campus for the White Coat Ceremony.

Standout students

The dental school held the 42nd Professionals Day in October to recognize accomplishments of pre- and postdoctoral students who have undertaken research projects focused on oral health.

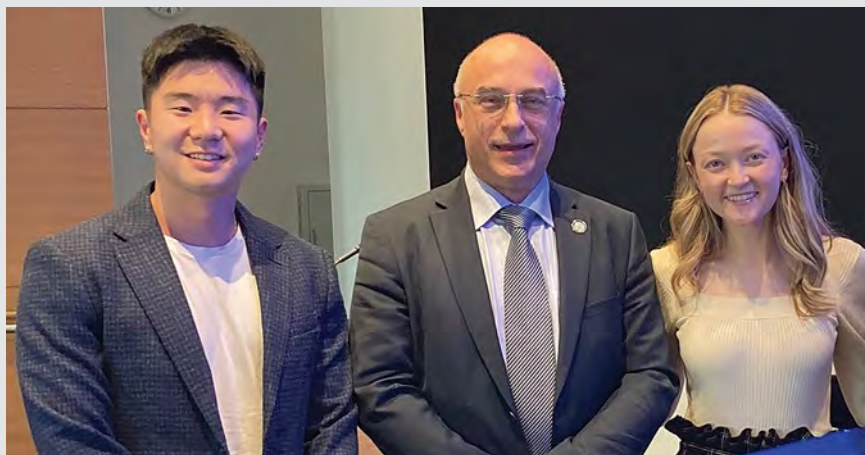
This annual celebration of scholarly activities includes presentations of research by students, residents and faculty. Students with exemplary projects also earn awards, with the

top prize going to a student who will represent Case Western Reserve University School of Dental Medicine in the national competition at the American Association for Dental, Oral and Craniofacial Research meetings the following year.

At the event last fall, Dean Chance opened up the oral presentations, and Associate Professor **Catherine Demko, PhD (GRS '02, epidemiology and biostatistics)**, served as moderator.

Throughout the afternoon, seven Doctor of Dental Medicine students described the objectives, methods and results of their research projects and answered questions from the audience.

Later in the day, **Ibrahim F. Tulunoglu, PhD**, associate professor of comprehensive care and chair of the judging committee, presented the awards to students whose work proved exceptional among their peers. Here's a look at this year's winners. ■



The Omicron Kappa Upsilon award was presented to Kunwoo Shin (left) and Emily Fromel (right) by Ibrahim Tulunoglu, PhD (center).



The Student Competition Advancing Dental Research and Its Application award, the top prize for DMD students, was given to Shu Tu (left) by Catherine Demko, PhD (right).



The Greater Cleveland Dental Society (GCDS) award for the best graduate student poster presentation was given to Muhammad Sohail (left), Department of Periodontics, by Joseph Leon, DMD, of the GCDS (right).



The Guenther M. Hans Award was presented to May Lin (right) by Mark Hans, DDS (left), son of Guenther M. Hans.



The Vibeke K. Nygaard Award, a non-research award for students who have demonstrated the greatest achievement in the didactic and clinical components of both the Dental Anatomy and Masticatory Dynamics courses, was given to first-year student Kristen Almenario (left) by Roma Jasinevicius, DDS (right).

New dialogues

Dean's inaugural lectureship finds an audience

When Jon B. Suzuki, DDS, PhD, MBA, was dean of University of Pittsburgh School of Dental Medicine in 1994, a plane crashed a few miles from the runway at Pittsburgh International Airport. Because of his expertise and credentials, he was deputized as a local coroner, and took 80 students with him to help identify the dental remains of passengers.

On Sept. 11, 2001, he would be called to provide this service once more in Somerset, Pennsylvania.

Suzuki shared his experiences with lesser-known career paths for dental professionals—forensic dentistry, for example, and as chair of the Dental Products Advisory Panel for the Federal Drug Administration—in November at the inaugural Dean Kenneth B. Chance Endowed Distinguished Lectureship.

Suzuki, who is on the faculty of the U.S. Navy Walter Reed National Medical Center and holds clinical professorships at University of Maryland, University of Washington and Nova Southeastern University, presented “Excellence: the Pathway to Leadership.”



Kenneth Chance and Jon Suzuki

Photos by Andrew Jordan

Last year, Dean **Kenneth Chance, DDS (DEN '79)**, and his family established this lectureship series in honor of the 130th anniversary of the School of Dental Medicine. Each lecture will feature a distinguished leader who will present on a topic—one that is relatable to students and professionals in cross-disciplinary fields—to promote necessary dialogue and meaningful interactions, contributing to the better understanding of complex issues that confront our society.

Suzuki's presentation was “exactly what we're trying to do [with this lectureship],” said Dean Chance. “We are trying to talk about leaders in [the dental] profession but who operate outside those professions [...] where their expertise is needed to solve different and more expansive questions for the sake of safety, security, advancement in research and quality of life for all.”

That was precisely the event's effect on attendee **Seoyoun (Christine) Park**, an undergraduate who works in the dental clinic and is studying nutritional biochemistry and metabolism.

“I was astounded by how much larger the field of dentistry can be than a private practice,” she said, noting she left the event feeling “motivated and inspired.”

Miranda Peck, a third-year dental student who attended the lecture, agreed. “As a student, it's always nice to hear from someone in the field and realize—oh, it can happen. There is life after graduation, and it's worth it in the long run.” ■



Faculty, staff and students gather after the Dean Kenneth B. Chance Endowed Distinguished Lectureship.

Honors, awards and appointments



Quereshey

Faisal Quereshey, DDS, MD (MED '94), professor of oral and maxillofacial surgery and director of the oral and maxillofacial surgery program, was named president of the Ohio Society of Oral and Maxillofacial Surgeons in May.



Schincaglia

Gian Pietro Schincaglia, DDS, professor of periodontics and chair and director of the periodontics graduate program, was awarded the Outstanding Periodontal Educator Award by the American Academy of Periodontology for excellence in teaching.



Williams

The Office for Inclusion, Diversity and Equal Opportunity at Case Western Reserve recognized **Kristin Williams, DDS (DEN '89; GRS '05, public health)**, associate dean for admissions and student affairs, with the Faculty

Diversity Excellence Award for her significant contributions toward enhancing the university's commitment to diversity through inclusive thinking, mindful learning and transformative dialogue.



Nelson

Suchitra Nelson, PhD (GRS '84, nutrition; GRS '88, '92, epidemiology and biostatistics), associate dean for clinical and translational research, received one of Case Western Reserve

University's four Distinguished Faculty Research Awards during CWRU's Innovation Week in October, recognizing her research and other scholarly pursuits that drive change in creative and inspiring ways.

PROMOTIONS

In July, four School of Dental Medicine faculty members were promoted from assistant to associate deans.



Manish Valiathan, DDS (DEN '99, '02)
Associate Dean
for Clinical Affairs



Kristin Williams, DDS (DEN '89; GRS '05, public health)
Associate Dean for
Admissions and
Student Affairs



Andres Pinto, DMD (MGT '17)
Associate Dean
for Graduate Studies



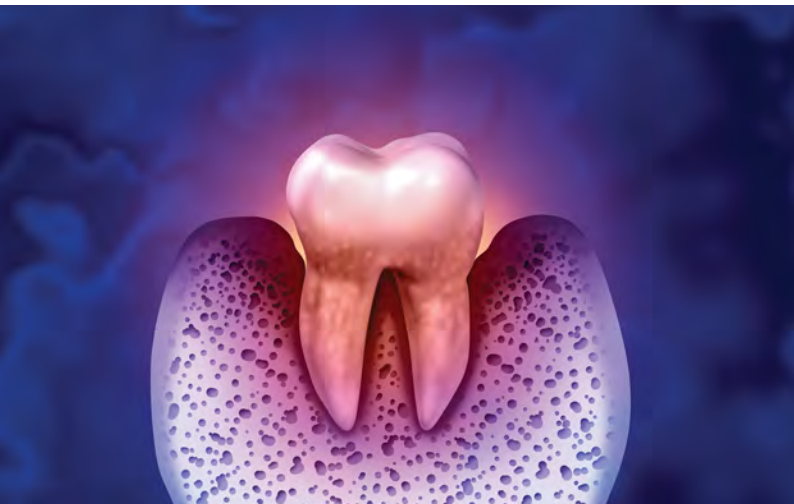
Suchitra Nelson, PhD (GRS '84, nutrition; GRS '88, '92, epidemiology and biostatistics)
Associate Dean for Clinical and Translational
Research

School of Dental Medicine Dean **Kenneth Chance, DDS (DEN '79)**, was appointed as the first Black president of the Supreme Chapter of Omicron Kappa Upsilon, the national dental honor society that represents and promotes the highest standards of scholarship, professionalism and ethics in dentistry. He is also a contributing editor to *Undaunted Trailblazers: Minority Male Leaders in Oral Health*, which will be published this year.



Chance

Faculty publish their **latest research**



Aminoshariae

Anita Aminoshariae, DDS (DEN '99), professor, co-published "Effectiveness of vital pulp treatment in managing nontraumatic pulpitis associated with no or nonspontaneous pain: a systematic review" and "Single nucleotide polymorphisms as a predisposing factor for the development of apical periodontitis: an umbrella review" in *International Endodontic Journal* in May and July, respectively. She also co-published "External cervical resorption: a volumetric analysis on evolution of defects over time" in the October issue of *Journal of Endodontics*.



Bissada

Last March, **Nabil F. Bissada, DDS (DEN '78)**, professor of periodontics and associate dean for global relations, co-published "Combinations of chronic conditions, functional limitations and geriatric syndromes associated with periodontal disease" in *Family Medicine and Community Health*.

Leonardo Marchini, DDS, PhD, professor and chair of comprehensive care, co-published "A tool for incorporating interprofessional perspectives into dental students decision-making: A 2-year follow-up on this learning outcome" in the October issue of *Clinical and Experimental Dental Research*.

Andre Paes Batista da Silva, DDS, PhD, assistant professor of periodontics, co-published "Status of North American graduate programs in periodontics providing laser education and clinical training: a cross-sectional survey" in *Dentistry Journal* in July, and "Evaluation of periodontal status and cytokine levels in saliva and gingival crevicular fluid of patients with inflammatory bowel diseases" in *Journal of Periodontology* in June.



Palomo

Last spring, **J. Martin Palomo, DDS (DEN '97)**, professor of orthodontics, co-published "Dental and skeletal side effects of oral appliances used for the treatment of obstructive sleep apnea and snoring in adult patients: a systematic review and meta-analysis" in *Journal of Personalized Medicine* and "Skeletal maturation in different anteroposterior and vertical skeletal growth patterns in female subjects" in *Journal of Orofacial Orthopedics*.



Together with **Tarek Maher Elshebiny, DDS (DEN '18)**, assistant professor of orthodontics, Palomo co-published "Comparing 3D tooth movement when implementing the same virtual setup on different software packages" in *Journal of Clinical Medicine* in September. That same month, they also published "Cone-beam computed tomography assessment of maxillary anterior alveolar bone remodeling in extraction and non-extraction orthodontic cases using stable extra-alveolar reference" in *Orthodontics & Craniofacial Research*.



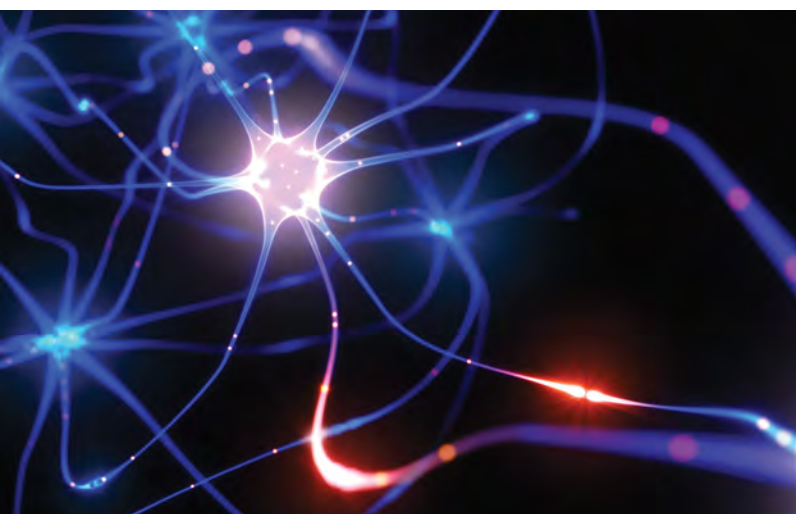
Wang

Russell Wang, DDS, professor of comprehensive care, co-published "Effect of the prosthetic index on stress distribution in Morse taper connection implant system and peri-implant bone: a 3D finite element analysis" in the September issue of *BMC Oral Health*.



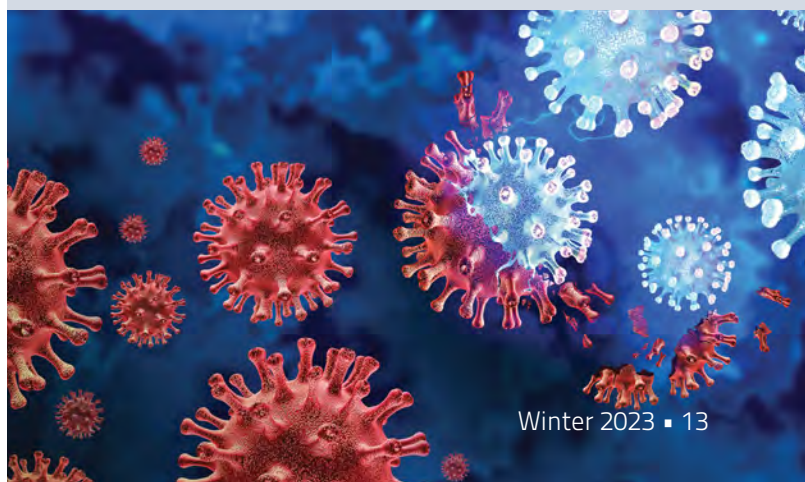
Schincaglia

Gian Pietro Schincaglia, DDS, professor of periodontics and chair and director of the periodontics graduate program, co-published "Gingival Pedicle With Split-Thickness Tunnel Technique: A Retrospective Case Series for Single Mandibular Anterior Recessions" in the April issue of *Clinical Advances in Periodontics*.



Weinberg

Aaron Weinberg, DMD, PhD, professor and chair of biological sciences, co-authored a study investigating a method for impeding the transmission of SARS-CoV-2 at the molecular level. Weinberg and his colleagues tested the efficacy of human beta defenses in inhibiting the spread of CoV-2 into human cells. The study, "HBD-2 binds SARS-CoV-2 RBD and blocks viral entry: Strategy to combat COVID-19," was published on research platforms including *ResearchGate*, *ScienceDirect* and *PubMed* last March.



Syed

In September, **Ali Syed, BDS**, assistant professor of oral and maxillofacial medicine and diagnostic sciences, co-published "Convolutional neural network performance for sella turcica segmentation and classification using CBCT images" in *Diagnostics*.

Investments in **inquiry**

NIH funds two faculty-led research projects in oral health

With support from the National Institutes of Health (NIH), two faculty members at Case Western Reserve University School of Dental Medicine are each leading their own research efforts to improve the oral health of underserved and vulnerable populations.

Looking for a cause

HIV attacks the body's immune system and interferes with its ability to fight infections. More than one-third of HIV patients develop some form of oral side effects, such as mouth lesions, which greatly impact their quality of life.

With the support of a \$3.25 million NIH grant, Case Western Reserve researchers hope to learn more about how HIV impacts the human body—from mouth lesions to oral cancer—by identifying genetic, microbiome and metabolic biomarkers that cause these oral complications

"We want to see if the metabolic genes in these immune cells are associated with increased rates of cancer."

—Pushpa Pandiyan

Pushpa Pandiyan, PhD, associate professor of biological sciences, is leading the project as principal investigator, and is joined in the study by School of Medicine faculty members Adam Burgener, PhD; Mark Cameron, PhD; Mahmoud Ghannoum, PhD; and Jeffrey Jacobson, MD.

The five-year research project will focus on regulatory T-cells (otherwise known as "Tregs"), a type of white blood cell that helps the immune system fight off infection. But sometimes T-cells can malfunction, triggering issues in the mouth and throat, eventually leading to prolonged inflammation and even disease.

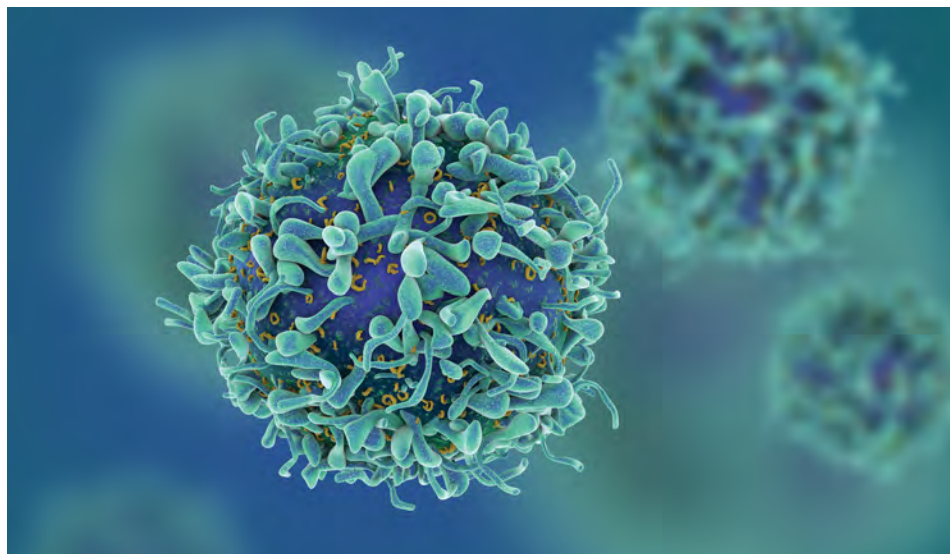
"We also know that HIV patients have a higher prevalence of oral cancer," explained Pandiyan, "and we want to see if the metabolic genes in these immune cells are associated with increased rates of cancer."

When the study wraps up in 2026, Pandiyan said, they hope to be able to identify potential targets for therapeutics in HIV-positive patients



Pushpa Pandiyan

and gain an increased understanding of the gut microbiome's role in oral manifestations of HIV. ■



Addressing disparities in oral health

According to the Ohio Department of Health, adults with low incomes have high rates of oral disease—including cavities and periodontitis—and a low rate of dental appointment attendance.

Suchitra Nelson, PhD (GRS '84, nutrition; GRS '88, '92, epidemiology and biostatistics), associate dean of clinical and translational research at the School of Dental Medicine, hopes to change that with a recently awarded grant of \$656,000 from NIH's National Institute of Dental and Craniofacial Research.

If the two-year pilot project, called "Multi-Level Interventions to Reduce Oral Health Disparities Among Adults in Primary Care Settings," is successful, it is expected to transition to a five-year, large-scale clinical trial with a proposed budget of about \$6.4 million.

Nelson has two project collaborators: David Kaelber, MD, PhD (GRS '94, '99, biomedical engineering; MED '00), professor of internal medicine, pediatrics, and population and quantitative health sciences at CWRU School of Medicine and chief medical informatics officer at MetroHealth System, as well as **Gregory Heintschel, DDS**, senior associate dean and clinical associate professor at the dental school and chair of MetroHealth System's dental medicine department.

"The collaboration [between the dental school and MetroHealth] provides a rare opportunity to more closely integrate oral and systemic health to the benefit of the senior population," said Heintschel.

Together, they aim to work with primary care physicians and nurse



practitioners at MetroHealth and 10 other providers to help them identify oral health issues and educate their patients about the connection between oral and systemic health.

Nelson said oral health disparities are often caused by two factors: the lack of patient dental information in electronic health records, and inadequate education and training for medical providers.

The team will target the first factor by adding questions about patients' oral

histories during medical appointment vitals checks. To address the second, they will ensure physicians and nurse practitioners involved in the project—specifically those caring for adults ages 55 and older—are trained in oral health education and care.

"We are really excited about the oral and medical integration of the project," said Nelson. "This is believed to be the first clinical trial that incorporates oral health into primary care." ■

"We are really excited about the oral and medical integration of the project. This is believed to be the first clinical trial that incorporates oral health into primary care."

—Suchitra Nelson



Suchitra Nelson



Dental students use the Microsoft HoloLens mixed-reality headset and the HoloAnatomy app to explore a digital cadaver during the “Thoracic Cage & Pulmonary Cavity” module.



DIGITAL DENTISTRY

Dental school becomes national leader by using technology
to transform treatment and education

BY DANIEL ROBISON

In a classroom at the Health Education Campus of Case Western Reserve University and Cleveland Clinic, a small group of second-year School of Dental Medicine students stand in a circle around a digital cadaver. Together, they dissect the virtual three-dimensional body—removing layers of skin, muscle and bones.

Each student is wearing a Microsoft HoloLens mixed-reality headset, which superimposes holographic content onto otherwise empty classroom space. Transparent visors blend their digital and analog fields of view as the group traces tracts of cranial nerves central to the day's lesson in neurology.

"I was blown away by how crisp the images are, how we're able to isolate certain structures and understand the spatial relationship of anatomical structures," said **Tanner Hauptman**, a second-year dental student, of the experience last fall. "That first time, we all looked at each other and thought it was so cool. We were taken aback."

The mixed-reality software Hauptman described is known as HoloAnatomy. Developed by Case Western Reserve's Interactive Commons—which employs visualization technologies to enhance research and teaching—the software suite was the first third-party application for the Microsoft device. In 2019, the software became the primary means of anatomy education at the university's School of Medicine.

In fall 2022, the School of Dental Medicine became the first of its kind in the country to use the technology.

"Everyone has different learning styles," said **Caitlyn Ryan**, a second-year dental student. "As a visual learner, I find mixed reality helps me bring together concepts learned in many different ways for a better overall understanding."

Same anatomy, new technology

Second-year dental student **Rachel Elkowitz** comes from a family of dentists. In fact, her grandfather, **George Elkowitz**, and uncle, **Lloyd Elkowitz**, both graduated from the dental school in 1960 before practicing in Brooklyn and Long Island.

"I'm learning the same materials they did—but our educations are so different," said Elkowitz. "Anatomically, people are the same as then, but technology is allowing my class to learn about the body in a more detailed way."

Learning sessions employing mixed reality are scheduled for specific points throughout the curriculum to coincide with classroom and cadaveric learning.

For instance, students took HoloAnatomy's "Thoracic Cage & Pulmonary Cavity" module while studying the musculoskeletal system early in their second year and the "Ascending and Descending Tracts" module using the new HoloNeuro application during the same semester's neuroanatomy course.

"It's immersive and experiential learning that gives us another way of seeing human anatomy in a new and totally different perspective," said **David Rolf II, DMD**, associate dean for academic affairs at the dental school. "With HoloAnatomy, our students can navigate into and around structures in the body in ways they're unable to do in a cadaver."



Rolf

This emphasis on excellence in anatomical sciences education is partly a recognition that healthcare is becoming more collaborative and interdisciplinary, which students will encounter when entering the workforce, said Rolf, who collaborated on the launch of HoloAnatomy along with the dental school's dean, **Kenneth Chance, DDS (DEN '79)**, and Associate Professor **Michael Landers, DDS (DEN '76)**.

"It's as vital as ever that our students understand the whole health of their patients," Rolf said, "and how dental professionals are increasingly part of holistic approaches to treatment and care."

Learning aspects of dentistry via mixed reality would have been unimaginable for Elkowitz's grandfather, but he would have been fascinated by its possibilities, she said. He had an enduring admiration for his alma mater, and he encouraged her to apply. Just prior to her acceptance to the dental school, he passed away.

"It makes it even more special to be here, carrying on his legacy now, in my own way," Elkowitz said. "Having these unique educational experiences would make him proud—of me and of our school."

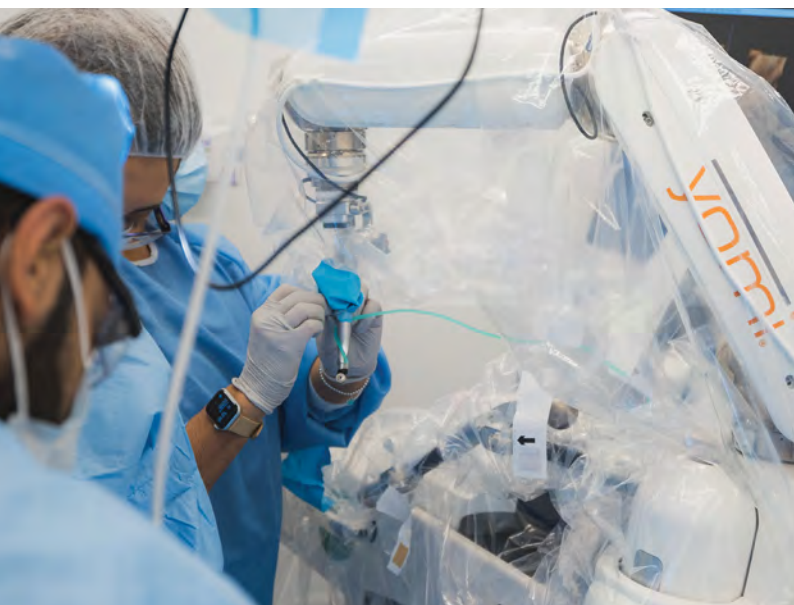
Attainment and retainment

The advancement of educational technology is no surprise to **Rebecca Enterline**, a research associate at the School of Medicine involved in the dental school's adoption of HoloLens.

After all, she helped design and create artwork for HoloAnatomy. Case Western Reserve became the first higher education institution to use HoloLens technology in 2014—back when it was still an unpublicized Microsoft project.

Not only has Enterline had a hand in creating the innovative new learning experience through the software students use, but she also has had a front-row seat to witness how they benefit.

Enterline and university colleagues conducted peer-reviewed studies while building, piloting and launching HoloAnatomy. The data they collected has consistently demonstrated that the mixed-reality approach is an effective and efficient educational tool for students.



Dental school residents prepare the Yomi robot to treat a patient.

Specifically, some of the published findings show that HoloAnatomy decreases the time necessary for anatomy instruction without sacrificing student understanding of the material.

Researchers also found no significant differences in exam performance between students who learned anatomy through mixed reality and those who learned through cadaveric dissection. Another study showed that students retained knowledge from HoloAnatomy sessions held years before.

"All of our technological approaches are to make students more practice-ready, confident and precise," said Chance. "This is not technology for technology's sake—it's to facilitate the most efficient and time-saving learning methods to create the best-trained individuals who will then provide optimum treatment and healing for patients."



Chance

Even as mixed reality has proven to be a viable approach to teaching gross anatomy, university health sciences students still take part in cadaveric dissection, which has a distinct educational value all its own, said Enterline.

Medical and dental students, she said, "will be laying hands on patients as future healthcare professionals. It's difficult for technology to mimic the tactile experience of cadaveric dissection."

New body of knowledge

Before trying mixed reality for class, **Mena Morcos**, a second-year dental student, was admittedly skeptical, thinking, "it would be the same as a cadaver, just digitized."

But Morcos was struck by the level of specificity in the software's anatomical renderings: "It was additive and has stuck with me," he said. "Now that we've experienced both virtual and traditional dissection, I feel they're both better for existing side by side."

Using mixed reality in the dental school is meant to augment students' experiences in the cadaver lab, said Rolf, who oversees the dental school's predoctoral curriculum. In between dissections—virtual or traditional—students also use a new complementary tool to enhance their learning: Complete Anatomy, 3D4Medical's software platform of interactive 3D modules that facilitates learning at each student's own pace on their laptop, tablet or smartphone.

Combining all of these approaches early in students' dental education is deliberate; it prepares them to effectively integrate and apply their anatomy knowledge and skills as they start clinical work in their third year.

"I am feeling more confident looking ahead to the clinic," said

Hauptman, who is also class president. “My ultimate goal is to make my patients healthy and happy because I love making people smile.”

Meet Yomi

Yomi joined the dental school in September. But Yomi is not a faculty member or student—it’s a robot used for both students’ clinical training and the treatment of patients.

As the first and only FDA-approved dental robotic system for implant surgery, Yomi physically guides a surgeon to perform a procedure as was planned using scans and software pre-operatively. If a surgeon is moving in the wrong direction, Yomi resists, offering tactile feedback.

In general, a robot-assisted approach reduces time, errors and patient discomfort—placing implants with a high level of accuracy, said **Gian Pietro Schincaglia, DMD**, professor, chair and graduate program director in the Department of Periodontology.

“The potential of robotic technology in dentistry is huge,” he said. “The implications of digital fit our profession well—because what we do is precision. Robotic technology is all about precision.”

Case Western Reserve is among only four dental schools in the country with a Yomi robot, joining New York University, Boston University and West Virginia University. Fewer than 150 are in place at practices around the country, given that the technology was only recently brought to market by healthcare startup Neocis.

“Our students understand technology will never replace a competent and caring dentist,” said Chance. “We use new methods along with our ethics, our knowledge, skills, critical thinking and judgment.”

Treating and teaching

Yomi is part of the dental school’s emphasis on same-day dentistry, which calls on a range of technologies to reduce the time and number of appointments needed to treat patients.

In that spirit, Yomi offers what’s known as a “digital implant workflow,” explained Schincaglia. It first implements digital scanners that map a patient’s mouth (instead of a mold-based impression), then surgical software to simulate and plan restorations. Finally, it uses 3D printing to create devices necessary for placing implants precisely.

“Patients can be treated faster with less surgical trauma,” said Schincaglia. “There’s a clear advantage from a service perspective.”

For teaching, Yomi serves as a didactic tool, complementing



Schincaglia



Second-year resident Mina Youssef reviews images from the Yomi robot.

traditional freehand training for placing implants. Holding a drill attached to Yomi’s three-jointed arm, residents’ movements and placements are guided throughout surgery, though they maintain control of the drill at all times. Their first few implants are performed with the robot, and students gradually move to a traditional freehand approach.

“Students automatically incorporate information that can be utilized when they perform surgeries freehand,” said Schincaglia, who joined the dental school in 2021 from West Virginia University, where he established one of the first robotic dental implant programs in the country. “They already have the feeling of drilling bone and how precise you have to be.”

Mercurious “Mark” Mina, DMD (DEN ’22), a senior resident in the periodontology residency program at the dental school, has performed implants both with and without Yomi’s guidance.

“The possibility for error is much smaller with Yomi. That makes a big difference in placing implants at exact angles and positions in a jaw’s limited space,” said Mina. “It’s ideal for the patient—whatever you planned beforehand is getting done exactly.”

Surgical robotics have transformed multiple medical disciplines and enabled early adopters to differentiate their practices and become the recognized leaders in their fields, Schincaglia said.

Current and prospective students at the dental school are fully aware of the advantages and appeal of such breakthrough devices, said Chance. They’re also drawn to innovative teaching and learning techniques, including mixed reality, that can give them an edge in preparing to enter their profession.

“This generation is very much rooted in technology,” said Chance. “Our students are playing a part in the future of dentistry, and they are already leaders in this space.” ■



Bringing care to the community

Faculty and students provide lifesaving, essential care to those in need

By Laura Meyer and Lauren Marchaza

LGBT individuals often experience systemic harassment, discrimination and a lack of cultural competency from their healthcare providers, according to the Center for American Progress. The result: Their health outcomes are much worse when compared with their heterosexual counterparts—putting them at higher risk for developing diseases such as cancer.

So when **Suparna Mahalaha, DDS (CWR '98; DEN '01; GRS '04, public health)**, met Gulnar Feerasta, director of programs at the LGBT Community Center of Greater Cleveland, she saw an opportunity to do what she does best: help those in need.

The two were participants in Cleveland Leadership Center's Bridge Builders—a program that enables civic engagement among mid-career professionals—and began talking about their work in the community. That's when Mahalaha helped Feerasta connect two very important dots.

Individuals who use tobacco, Mahalaha explained, are more likely to develop oral cancer—a condition the assistant

professor of community dentistry at Case Western Reserve University School of Dental Medicine routinely screens for among her patients.

"We have many smokers who come to the center, and it had never occurred to me to provide oral cancer screenings," said Feerasta. "When Suparna mentioned this, I realized that it was a huge need for our community."

The solution, she decided, was simple: Feerasta invited Mahalaha—who provides dental care to the community in her role at the dental school—to a pop-up health clinic event at the center, where she would perform oral cancer screenings, tobacco cessation counseling and oral health education.

Mahalaha came to the event prepared to provide trauma-informed, safe and compassionate care.

"There is a lot of trauma in the LGBTQ community, specifically medical trauma," explained Feerasta, citing doctors' lack of understanding of patients' identities, histories or experiences.

"A lot of [members of] the LGBTQ community don't go to doctors or dentists out of fear," she added.



Suparna Mahalaha



Suparna Mahalaha screens a patient at the LGBT Center of Greater Cleveland for oral cancer.

When it came to Mahalaha's approach, Feerasta had high praise: "She was so gentle and calm, making sure to let each individual know exactly what she was doing. She would say, 'I'm going to go near your mouth now,' which is so important to do when you are treating folks with histories of trauma."

The event went so well that Feerasta invited the team back the following month for another pop-up clinic, when even more people attended. One of those people, Diamond Robinson, had severe damage to her teeth from prolonged drug use in the past.

"I sometimes get a little embarrassed about my mouth, but I realize this isn't how my teeth will look forever—I just have to take care of it," said Robinson, who has been living at a sober house during her recovery. "I'm really happy I came to this event today."

Mahalaha believes she couldn't have found a better partner than Feerasta, whom she described as "an inspiring and passionate advocate for the LGBTQ community."

And this year, they have more pop-up clinics planned.



Diamond Robinson was a patient at the LGBT Center of Greater Cleveland's pop-up clinic in June.

"It became apparent that we needed to do more as public health dentists to promote oral health education and outreach in this community," said Mahalaha.

Lifelong Smiles

The LGBT Center of Greater Cleveland isn't the only place Mahalaha frequents in her quest to provide care to the community. She also rolls around town in a 38-foot mobile van, visiting adult day care centers and nursing homes, treating elderly patients who would otherwise go without comprehensive dental health care.

The Lifelong Smiles van, as it is known at the School of Dental Medicine, is part of a geriatric dentistry program overseen by Mahalaha and **Lisa Blackmon, DDS**, visiting assistant professor of community dentistry. With the support of FirstEnergy Foundation and The McGregor Foundation, the community dentistry team drives the converted RV around the Cleveland area, ready to welcome patients aboard where they receive cleanings, screenings and even X-rays while sitting in fully functioning dental chair stations.



Last May, Case Western Reserve University President Eric W. Kaler (third from left) and his wife, Karen F. Kaler (second from left), climbed aboard the Lifelong Smiles van with members of the community dentistry team to learn how the program provides much-needed care to the Cleveland community.

McGregor PACE, a nonprofit senior care organization, has been bringing Lifelong Smiles to its facility since the program's inception.

"It's had a tremendously positive effect on all involved," said Tangi McCoy, CEO at McGregor PACE. Residents who participate in the program, she said, don't have to travel or ask their loved ones to help them make special arrangements for the appointments. Staff and nurses save time and resources because they don't have to transport and escort residents to a dentist's office.

Even more important, she said, is watching the residents get the dental care they need in a familiar place. "Some of them have natural anxiety, so to have their services delivered around people they're comfortable with and trust makes that delivery so much better," she said. "They're more relaxed and at ease, and it's less confusing for them."

But it's not just underserved seniors who benefit from the program, which has helped about 900 patients since it first hit the streets in 2015.

"What we offer them," said Mahalaha, "they give back to our students tenfold with lessons in hands-on care and compassion."

Mahalaha and Blackmon enlist a team of third-year dental students, who join them to provide comprehensive dental care, assess patients through interdisciplinary training and attend patient rounds with a geriatrician. It's all part of their curriculum, which requires them to complete a clinical geriatric rotation.

One of those students is fourth-year **Laura Smith**, who provides exams, cleanings, X-rays, fillings, dentures and more as a member of the Lifelong Smiles team this year.

"When our teeth go, our ability to eat a balanced diet goes with it, and it is just a cascading effect until overall health starts to decline," she said, emphasizing how important it is for seniors to receive oral healthcare. "I've seen firsthand how life-changing this program is for our patients." ■

Commemorating achievements

Class of 2022 celebrates successes, looks ahead to the future

On a Sunday in May, students from Case Western Reserve University School of Dental Medicine prepared themselves to join the ranks of newly degreed dentistry professionals.

Graduating dental students gathered at the Cleveland Museum of Art for the presentation of their diplomas. Dean **Kenneth Chance, DDS (DEN '79)**, opened the event with welcome remarks and introduced the keynote speaker, Raymond Gist, DDS, who in 2010 became the first Black president of the American Dental Association. With Dean Chance's recent appointment to the role of president of the Supreme Chapter of Omicron Kappa Upsilon (see p. 11), the occasion is believed to be the first time two Black presidents from national dental organizations shared the same stage at the same time.

"You are soon to be very distinguished members of a profession that is built on a foundation of professionalism, trust and ethical behavior that is above reproach," said Gist, "and maintaining and building on this foundation will define you as you move forward."

"My invitation to you," he added, "is to continue to define your goals and follow the path most favorable for your success while refusing to quit."

Imani Behrens, DMD (CWR '18, DEN '22), senior class president, and **Ashleigh Kmentt, DMD (DEN '22)**, student council president, delivered parting remarks to their peers before Dean Chance presented a diploma to each new graduate who walked across the stage. ■



Members of the Class of 2022 take a group photo at the entrance of the Cleveland Museum of Art after the diploma ceremony.



Graduating dental students pose backstage before the diploma ceremony.



Commencement speaker Raymond Gist (left) and Dean Kenneth Chance (right).



The diploma ceremony at the Cleveland Museum of Art's Gardiner Auditorium

Together again

Alumni reunite while marking the dental school's 130th year

Every fall, Case Western Reserve invites alumni back to campus for Homecoming and Reunion Weekend. From Oct. 6 to 9, the university held its first full-fledged homecoming event since 2019. Attendees joined more than 100 virtual and in-person events that included an opening night "Blue Bash" celebration, a pregame party and a free concert.

Throughout the weekend, more than 200 School of Dental Medicine alumni attended various events organized by the school.

The school hosted the inaugural Jack Love Endowed Fund for Prosthodontic Excellence Continuing Education Course, in which Dean **Kenneth Chance, DDS (DEN '79)**, welcomed dental school alumni and noted the historical milestone of the school's 130th anniversary. During that event, attendees listened to lectures from **Dale Baur, DDS (DEN '80)**, vice dean and chair of oral and maxillofacial surgery, and **Russell Wang, DDS**, professor of comprehensive care. Later, the Women in Dentistry panel featured dental student **Gabrielle Dean** and alumnae **Lisa Petti, DDS (DEN '81, '83)**, and **Kari Cunningham, DMD (DEN '10, '12)**, who poignantly shared their experiences navigating the field of dentistry as women.

At that evening's class dinners, the Alumni Association distributed awards and gave a special nod to the Class of 1972 in recognition of its 50th reunion.

Pictured here are just some of the memories from the weekend's events. ■

Alumni award winners are on pages 26-27.



Dale Baur and Russell Wang



Marcia and Charles Arens



Dental school alumni, faculty and staff



From left: Gabrielle Dean, Lisa Petti and Kari Cunningham



Tiffany Hong

Photo by Laura Meyer



From left: Leonard Russell, Lynne Sutherland, Andres Pinto



Denis Schreiber and Brad Knapp



Jeremy Wilde



Dental school alumni tour the dental clinic



Todd Hearn and Leonard Russell



B. Douglas Amberman



Dental school alumni check in during Homecoming and Reunion Weekend

Together again, continued

ALUMNI ASSOCIATION AWARDS

Distinguished Alumnus Award Dale Baur, DDS (DEN '80)

Dale Baur, DDS (DEN '80), first set foot on the campus of Case Western Reserve University as a dental student 46 years ago—with no idea how much of an impact he'd make on the School of Dental Medicine, or the people within it.



Dale Baur and his son, fourth-year dental student Andrew Baur

Neil Brofman, DMD (WRC '77, DEN '80), Baur's fellow classmate who nominated him for the award, remembered Baur as a "great student and classmate" with a "quiet and humble way."

Since his student days, Baur has accomplished much. In 1980, he enlisted in the U.S. Army Dental Corps as a general dentist and colonel, receiving many awards, medals and recognitions before retiring in 2007. At that point, he made his way back to CWRU—this time as professor and chair of oral and maxillofacial surgery (OMFS), as well as chief of OMFS at University Hospitals Cleveland Medical Center. Throughout his career, Baur has published 70 peer-reviewed articles and 12 book chapters.

Donald Lewis, DDS (DEN '76), associate professor in the Department of OMFS and member of the CWRU School of Dental Medicine Alumni Board, said

he has "personally observed [Baur's] relentless passion to make the School of Dental Medicine Department of OMFS and residency program known and respected throughout the country."

Brofman recently visited Baur and his residents in the classroom. "It was clear to me that they have enormous respect for Dr. Baur, and a very positive view of the school and program," Brofman said. "He is absolutely deserving of this award."

Baur's colleague, **James Perhavec, DDS (WRC '71, DEN '75)**, clinical professor at the dental school, also nominated Baur for the award. "His influence," Perhavec said, "is felt and carried with every graduate."

Outstanding New Dentist Award Adam Kennedy, DMD (DEN '14)

Adam Kennedy, DMD (DEN '14), showed great potential early on as a dental student, racking up awards, including a nomination for the American College of Dentists' Outstanding Student Leader.

It wasn't just for his academic performance; Kennedy was engaged in numerous professional societies, including the American Student Dental Association, Delta Sigma Delta, Omicron Kappa Upsilon,



Adam Kennedy with his wife, Janelle, and son, Jack

American Dental Education Association, Ohio Dental Association, American Dental Association and the Greater Cleveland Dental Society.

Classmate and nominator **Blake Sessions, DMD (DEN '14)**, said that when Kennedy was a teaching assistant for first- and second-year dental students, "it was clear that he had a deep determination to help others reach their goals."

Kennedy moved to Bellevue, Washington, in 2016 to open his own dental practice, AJK Family Dentistry. After five years in private practice, Kennedy and his family moved to Glastonbury, Connecticut, where he took on the new role of program director of general practice residencies at Yale New Haven Hospital.

Sessions was hardly surprised about Kennedy's prestigious new position. "The one thing I know about Adam," he remarked, "is that it's hard to spend much time with the guy and not get inspired."

Special Recognition Award (John) Michael Uhrich, DDS (DEN '71)

Margaret Uhrich Howell, DMD (DEN '09), remembers seeing her father's dedication to his craft as an endodontist throughout her entire life. **Michael Uhrich, DDS (DEN '71)**, she recalled, spent "countless hours" educating future dentists through teaching and volunteering.

By the time she became a dental student at Case Western Reserve School of Dental Medicine, where her father had gone to school and taught as an adjunct faculty member, Howell quickly became accustomed to hearing heartwarming stories from his former students who were now faculty.

"He's not one to seek out accolades or awards," she said when she nominated him for the Special Recognition Award,

"but his quiet mentorship and service to the university has not gone unnoticed."

Before going on to manage a private practice in Euclid, Ohio, for four decades, Uhrich was a captain in the U.S. Army. He earned his bachelor's degree from Xavier University and a master's degree in endodontics from Northwestern University before obtaining his DDS from Case Western Reserve School of Dental Medicine in 1971.

He and his wife, Roberta Uhrich (GRS '68, nutrition), started a family legacy: In addition to his daughter Margaret, his sons John Marcel Uhrich (MGT '99) and Marc Robert Uhrich (MGT '03) attended CWRU—and Marc married classmate Jen Lyden Uhrich (CWR '04). ■



Front, from left: Colin Uhrich, Margaret Uhrich Howell, Michael Uhrich, Roberta Uhrich, Kate Uhrich, James Uhrich. Back, from left: Nora Howell, Chris Howell, Jen Lyden Uhrich, Marc Robert Uhrich, Ryan Lawrence, John Marcel Uhrich, Bridex Uhrich.

PHILANTHROPY DEVELOPMENTS

Developments highlights special philanthropic support for the School of Dental Medicine from alumni, friends, corporations and more. Here are some of the gifts received in 2022.

Thomas J. De Marco, DMD, and Bonna P. De Marco committed \$500,000 to support student scholarships, creating The Dr. Thomas J. and Bonna P. De Marco Endowed Scholarship Fund.

Nathaniel Ritter, DDS (DEN '78), and Susan Ritter pledged \$430,000 through their estate.

Ronald Watanabe, DDS (DEN '77), committed \$160,000 through his estate to support The Watanabe Family Scholarship Fund.

Pietro Di Battista, DDS (DEN '90, '93), committed \$100,000 to the Periodontics Discretionary Fund.

David Albert, DDS (DEN '68), and Eileen S. Albert committed \$100,000 through their estate to support student scholarships.

Seema Sunil, DDS (DEN '93; GRS '95, orthodontics), and Sunil R. Dhingra pledged \$100,000 to the orthodontics department, creating The Dr. Seema Sunil and Mr. Sunil R. Dhingra Endowed Fund for Orthodontics.

FirstEnergy Foundation committed \$50,000 to support the geriatric dentistry mobile van, which is part of the LifeLong Smiles Community Dentistry Program (learn more on p. 20).

John and Deanna Nelson established The Katie Nelson Memorial Fund for \$25,000 in memory of their daughter, **Katie Nelson**, who would have graduated with the DMD Class of 2021.

Marc Wade Reissner, DDS (DEN '77), and Susan Heyman Reissner committed to support the School of Dental Medicine through their estate.

Joong Hee Hahn, DDS (DEN '89, '90, '92), and **Hui-Jin Lee, DDS (CWR '89, DEN '92, '95)**, committed \$20,000, designating \$10,000 to the Periodontics Discretionary Fund and \$10,000 to the Graduate Endodontic Discretionary Fund.

Fred Rosenberg, DDS (DEN '66, '68), committed \$22,000 to support the Frederick A. Rosenberg DDS Endowment.

John R. Blakemore, DDS (DEN '71), and Irene Blakemore committed \$10,000 to support the School of Dental Medicine Annual Fund.

CLASS NOTES

1950s

Robert Heckel (DEN '57), associate clinical professor of oral and maxillofacial surgery at Case Western Reserve University School of Dental Medicine, was honored for his 17 years of teaching by having the outstanding oral and maxillofacial resident award named the Robert D. Heckel Award in Oral and Maxillofacial Surgery.

1960s

Robert Krasny (DEN '60) and his wife, Rita, celebrated their 65th wedding anniversary in 2022. They live in Palm Desert, California, and have four children.



Robert Krasny

Jerry Zimring (DEN '60) has been retired for more than a decade. He and his wife of 65 years, Millie, moved from Ridgefield, Connecticut, to Sarasota, Florida, in 2020 to be near their daughter, Valerie.

1970s

James Pashayan (DEN '71) has been at Midwestern University's College of Dental Medicine for the past 15 years, where he was first the inaugural associate clinical dean, and is now associate dean for admissions, continuing education and graduate studies. He was previously on the faculties of University of Southern California, Case Western Reserve University and Arizona School of Dentistry and Oral Health. Pashayan and his wife, Sharon, have five granddaughters.

Richard Yost (ADL '70, DEN '72) has been retired for 11 years and lives in Fort Myers, Florida, where he and his wife, Judith, rode out Hurricane Ian while sheltering in their home last year.



Richard Yost

Ron Stark (DEN '73), an avid tennis player and member of the Club at Harbor Point in Mill Valley, California, qualified to represent Team USA in the Masters 75 category for tennis for the Maccabiah Games. Stark competed in India, and brought home a silver medal for the United States.



Ron Stark

Stuart Levine (DEN '74) and **Dena Babin (DEN '77)** live in Rhode Island and practice in Fall River, Massachusetts. They announced the marriages of their three children—Abigail, Nathaniel and Rebecca—last year.



Levine and Babin family

Alan Goldberg (DEN '78) retired from dentistry after 43 years in private practice. He and his wife, Diane, spend their winters in Arizona and their summers in New Jersey. They have three children and three grandchildren.

1980s

Paul Clark (DEN '82) retired in 2016 and lives in Greenwood, South Carolina, with his wife, Deb. They have three children and two grandchildren and spend their time golfing, boating and traveling.

Sylvia Malcmacher Kramer (DEN '82) works for a pediatric practice in Akron, Ohio, and has been a clinical instructor for the Lakeland Community College Dental Hygiene



Sylvia Malcmacher Kramer and Phil Aftoora

Program for three decades. She and her husband, Roger, have been married for 46 years and have four children and six grandchildren. Two of her children followed her into dentistry and have become pediatric dental specialists.

Charles Montgomery

(DEN '84) practices homebound dentistry in New Jersey and has a practice in Freehold called The Relaxing Smile. Montgomery will volunteer for his 16th year at Give Kids a Smile at Middlesex County Hygiene School. He hopes to retire in two years.



Charles Montgomery, third from left

Tom Leatherman (DEN '85) sold his practice in North Olmsted, Ohio, but will continue to work there in reduced capacity until he fully retires in 2025. He and his wife, Judy, have two children.



Tom Leatherman, far right

Thomas Sakshaug (WRC '81, DEN '85) manages his own practice in Pittsfield, Massachusetts, but is eyeing retirement. He spends his spare time gardening, landscaping, and hiking the mountains of Berkshire County and the western U.S. Sakshaug also works with Volunteers In Medicine



Thomas Sakshaug

Berkshires as a clinician and board member, and was named a Volunteer Hero of the Year by the Massachusetts Dental Society in 2016. He is the chair of the Pittsfield Airport Commission, vice chair of the Conservation Commission and managed two successful political campaigns for the current mayor of Pittsfield.

Thomas Dundon (DEN '86) received his third U.S. Army Meritorious Service Medal for his work as officer in charge at Camp Arifjan Kuwait Dental Clinic in 2022.



Thomas Dundon, back row, third from left

Dale R. Theis (DEN '86) retired from dentistry last year and moved to Tampa, Florida.

Drew Steinhilber (WRC '83; DEN '87, '89) retired in 2022 after practicing the dual specialties of oral and maxillofacial surgery and periodontics for more than three decades. His wife, **Soraya Steinhilber (DEN '87)**, also retired after 33 years of practicing pediatric dentistry. They have two children and live in Arizona.

1990s

Mario Pavicic (DEN '90, '92) was elected international vice president of Delta Sigma Dental Dental Fraternity. In October, he married his wife, Kay, in Canton, Ohio. He is the proud father of three children and two stepchildren.



Mario and Kay Pavicic

CLASS NOTES, continued



John Kevin Holman

John Kevin Holman (DEN '95) practices orthodontics at North Mississippi Orthodontic Associates in Tupelo, Mississippi. The University of Mississippi Medical Center Dental Alumni Board, of which he previously served as president, named him 2022 Dental Alumnus of the Year. Holman has served as District 1 president and trustee, as well as president of the Mississippi Association of Orthodontists of the Mississippi Dental Association. He is also a delegate to the American Dental Association and the American Association of Orthodontists.

2010s

John Wilson (DEN '11) retired from the U.S. Air Force, but still works with the National Guard. He and his family moved to Utah last year.



John Wilson and family

William Jacobson (MED '14, DEN '15) wrote the book *Clinical Dentistry Daily Reference Guide*, a one-stop resource with information to prevent, diagnose and treat oral health conditions.

2020s

Wen Zhou (DEN '22), who practices at Akron Family Dental in Ohio, received the Delta Dental Community Commitment Award for his practice in an area with a shortage of health professionals.



During his time at Case Western Reserve School of Dental Medicine, **Christopher Chance (CERT '16)** was chief resident of the pediatric program. **Gerald Ferretti, DDS**, professor and chair of pediatric dentistry at the dental school, was part of the team of faculty who selected Chance as chief resident.



Christopher Chance

"It's a competitive program," said Ferretti. "The chief resident is chosen based on academic and clinical performance, but they interact with patients, parents, residents—a lot of constituencies. And Chris was a leader and a mentor. He did an exemplary job."

Now practicing in Houston, Texas, Chance recently celebrated the first anniversary of his practice, Oaks Point Pediatric Dentistry.

Ferretti stays in touch with Chance and enjoys watching him continue to grow in his profession. "He's a lifelong learner," said Ferretti. "That's what we hope all of our residents will be."

IN MEMORIAM

Notices received between Feb. 1, 2022, and Jan. 9, 2023.

David A. Andrzejewski (DEN '64) of Orange Park, Florida, died Sept. 15, 2021.

Christopher John Auty (DEN '81) of Durham, New Hampshire, died Dec. 30, 2021. Auty completed his surgical residency at Hartford Hospital in Connecticut and worked as a surgeon from 1985 until he retired in 2019.

Robert E. Crowe (DEN '54) of Charleston, South Carolina, died Oct. 9. He practiced dentistry in Bay Village, Ohio, for 37 years and also was a clinical instructor at Case Western Reserve University School of Dental Medicine.

Dennis Martin DiPalma (DEN '79, '82) of Naples, Florida, died Dec. 13, 2021. He practiced as an orthodontist in Willoughby, Ohio.

Joseph L. Faust (ADL '60, DEN '63) of North Olmsted, Ohio, died June 30. Faust was a captain and dental specialist in the U.S. Army before becoming a private-practice dentist in West Park, a Cleveland neighborhood, where he practiced for 40 years.

Anthony A. Forde (ADL '69, DEN '73) of Parma, Ohio, died Jan. 2, 2022. He was an oral maxillofacial surgeon for 38 years.

Evan Douglas Francis (DEN '60) of Orem, Utah, died April 17. He served in the U.S. Air Force for 30 years, earning the rank of colonel and also holding the positions of base dental surgeon and hospital commander. At his retirement in 1990, he was awarded the Legion of Merit medal.

Charles P. Jaworski (DEN '75) of East Providence, Rhode Island, died Feb. 13, 2022. After graduating from Case Western Reserve, Jaworski enlisted in the U.S. Navy, where he served for 26 years before retiring as a commander.

Richard W. Juhnke (DEN '91) of Burlington, Michigan, died June 9. He served in the U.S. Navy and managed his own practice in Ohio for several years before joining a practice in Michigan.

Richard G. Kinkelaar (ADL '57, DEN '59) of North Olmsted, Ohio, died Nov. 8. He served in the U.S. Navy as a captain and practiced dentistry for more than 50 years in Westlake, Ohio, and Cleveland's West Park neighborhood.

Robert L. Kittredge (DEN '69) of Cape Cod, Massachusetts, died Nov. 2. During his career, Kittredge managed his own endodontics practice for 43 years, lectured at Harvard School of Dental Medicine and was a clinical professor at Forsyth Institute.

Eugene W. Kozel (DEN '66) of Monterey, California, died Sept. 2. Kozel served in the U.S. Army as a paratrooper for 20 years and managed a private practice for a decade.

Richard M. Lieberman (DEN '59) of Cleveland died Feb. 2, 2022. After earning his undergraduate and graduate degrees with the help of the GI Bill, Lieberman practiced dentistry throughout his career, including in the public health sector as a dentist on a Native American reservation.

John W. Mabee (DEN '72) of Bangor, Maine, died Oct. 16, 2021. After graduating from Case Western Reserve, Mabee earned a Master of Science in Dentistry in Periodontology and an advanced graduate degree in periodontology from Boston University. He then moved to Bangor, where he managed his own practice for 30 years.

Daniel M. Mahoney (DEN '64) of Toledo, Ohio, died Aug. 28. Mahoney was a lieutenant in the U.S. Navy after graduating from Case Western Reserve. He continued his career in dentistry until he retired in 2002, after which point he worked as a substitute teacher in the Toledo Public School district.

John Martin Maley (DEN '96) of Youngstown, Ohio, died July 22. He practiced dentistry throughout Northeast Ohio.

Lance A. McGannon (DEN '70) of Avon Lake, Ohio, died Oct. 3. In his 50 years practicing dentistry, McGannon served in the U.S. Public Health Service and was stationed in the Coast Guard at Governor's Island in New York City. He managed his own practice on the west side of Cleveland and was an adjunct instructor at Case Western Reserve.

Harry J. Melnick (DEN '59) of Skokie, Illinois, died June 12. Melnick practiced dentistry for 47 years in both Skokie and nearby Morton Grove.

Alan R. Morgan (DEN '58) of Provo, Utah, died March 2, 2022. Morgan served in the U.S. Army after graduation, earning the rank of major before resigning in 1964 to practice dentistry in Provo. Throughout his 42 years of practice in Provo, Morgan was a member and president of the Provo District Dental Society, a member of the American Dental Association and a member of the Utah Dental Association, where he served as chairman on the Utah State Dental Health Committee.

Robert S. Nolf (DEN '51, '53) of Virginia Beach, Virginia, died May 19, 2021. Nolf was an officer and dentist in the U.S. Navy for more than 30 years, serving around the world before retiring as a captain.

David B. Olson (DEN '57) of Orlando, Florida, died April 5. Olson served in the U.S. Air Force as a captain and dentist before earning a degree in orthodontics at University of Illinois Urbana. Olson practiced in Miami and Orlando for 30 years, was a member of the Florida Dental Association and American Association of Orthodontists, and served as president of the Florida Association of Orthodontists.

Cletus James Oswald Jr. (DEN '56) of Parma, Ohio, died Aug. 10. Oswald was a captain in the U.S. Army for several years before working as a dentist at Veterans Affairs hospitals in Cleveland and Brecksville. He was also an adjunct instructor at Case Western Reserve University School of Dental Medicine.

Michael Peter Pecenka (DEN '77) of Strongsville, Ohio, died Dec. 1, 2021. Pecenka was an engineer at NASA and Hughes Aircraft before he began his dentistry practice in Strongsville, which he managed for 40 years.

David A. Rhodes (DEN '75) of Youngstown, Ohio, died June 20. Rhodes established his orthodontics practice in Niles, Ohio, in 1976, and later expanded to locations in nearby towns of Champion and Liberty. Rhodes retired in 2017 after 40 years of practice.

Daniel L. Skinner (DEN '80) of Galion, Ohio, died April 16. Skinner practiced dentistry for more than 35 years, most recently in Ontario, Ohio.

Herbert J. Stacks (DEN '64) of Sarasota, Florida, died July 8. Stacks practiced for 36 years in Wayland, Massachusetts, in addition to other satellite dental offices across the state, in Uxbridge, Whitinsville and Cape Cod.

William D. Sterrett (DEN '48) of Clearwater, Florida, died June 27. After enlisting in the U.S. Army in 1942 and graduating from dental school six years later, Sterrett completed an internship in dentistry at the Public Health Service in Long Island, New York, and a dental surgery residency in Washington, D.C. He was discharged from the military in 1952 and moved to Skokie, Illinois, to practice dentistry. He eventually opened his own dental practice in nearby Edison Park, which he managed for the remainder of his career.

Alan G. Vincent (DEN '64) of Springville, Utah, died Aug. 29. Vincent practiced dentistry for 50 years in Modesto, California, before retiring in 2014.

James Franklin Yonally (DEN '53) of North Canton, Ohio, died Nov. 7. Yonally served in the U.S. Navy during the Korean War and held a leadership position in the Stark County Dental Society. He practiced dentistry in Northeast Ohio for more than 50 years.

Frank Jerry Zeleznik (ADL '57, DEN '62) of Altamonte, Florida, died July 20, 2021. After graduating from Case Western Reserve, Zeleznik served as a dentist in the U.S. Navy. He practiced dentistry for over 25 years in Cleveland before retiring and relocating to Florida.



From left: Jean Farah, Gladys Ina, Monica Jackson

Loyal and beloved

Gladys Ina, administrative coordinator at the School of Dental Medicine, died Aug. 19. A quiet, positive presence in the dean's suite at the School of Dental Medicine, Ina is remembered for her kindness, courage and strength.

After beginning her role at the dental school in 2013, Ina quickly became known among her colleagues as soft-spoken and sweet. She was always busy, and happy to support the work of **Ronald L. Occhionero, DDS (DEN '61)**, who was associate dean at the time.

"Gladys was the most loyal, dedicated and hard-working employee in my tenure of 58 years," said Occhionero.

"She was loved and appreciated by students, staff, faculty and myself, most certainly. She loved her work and was always ahead of the game," he added. "She was simply the best."



Gladys Ina

A Look Back

From the Archives of the School of Dental Medicine

Building on tradition

Innovative clinical training program endures nearly six decades after founding

The custom of preceptorship has roots in the middle ages, when skilled craftsmen passed down trades to apprentices. Early training for dental practitioners in the United States followed a similar model until the late 19th century, when the creation of national licensing standards led to a more formal education process.

Advances in dental medicine transformed the practice over the ensuing century, but in 1967, a young **Ronald L. Occhionero, DDS (DEN '61)**, saw



Occhionero

an opportunity to meld elements of the "old ways" with the science-driven methods of the 20th century.

When Occhionero attended what is now Case Western Reserve University School of Dental Medicine, oversight of the student dental clinic fell to a large, rotating group of part-time practitioners, which led to inconsistencies in student instruction and long wait times for patients.

So when the alumnus returned to Case Western Reserve in 1964 as a faculty member, he resolved to change that. Within three years, he launched the Preceptor Program. His design, which is still in place 56 years later, treats patients holistically by simulating a general practice, with smaller groups of



Ronald Occhionero with a student in 1973.

students working under the guidance of designated part- and full-time faculty members.

The structure was adopted by dental schools across the U.S. and is widely known today as the general practice model. Now part of the Department of Comprehensive Care, the Preceptor Program remains a pillar of clinical dental education at Case Western Reserve University, and is just one

piece of a profound legacy Occhionero left upon his retirement in July.

"I can't say enough about the people I have had the privilege of working with over all my years at the university," said Occhionero. "I've thoroughly enjoyed sharing the journey with my wonderful students, colleagues, staff and patients."

Occhionero's efforts have had a far-reaching impact and several alumni, inspired by their own experience at the school, have returned as instructors.

"Coming back to Case Western Reserve as a preceptor and visiting instructor after 20 years made me feel the true revolution in dentistry," said **Maysoun Daoud, DDS (DEN '03)**, a clinical preceptor who experienced the program firsthand.

"I am so proud to be a preceptor," she added, "and an alumna." ■

—Carey Skinner Moss



Dental students in the Preceptor Program in 1991.



WELCOME HOME.

Join us **Oct. 12–15** for **Homecoming and Reunion Weekend**, with an assortment of special events planned for our valued alumni.

Unable to attend in person? You can still take part in the fun!

This year's celebrations will include in-person, virtual and hybrid events.

If you are interested in serving as a class representative, please contact Michelle Hoffman, director of alumni relations, at 216.368.3924 or michelle.hoffman@case.edu.

We look forward to seeing you!
For more information,
visit case.edu/homecoming.



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