

**INVESTIGATING THE  
ROLE OF STEM CELLS  
IN TOOTH REPAIR**

Harvard Stem Cell Institute  
funds key research

**FINDING A FUTURE  
IN ACADEMIA**

Scholarship enables  
DMD graduate to pursue  
an academic career

**FAST FORWARD**

Futuristic technologies  
that improve oral health

# Harvard Dental

Harvard School of Dental Medicine  
Spring 2022 / Volume 82, Number 1



Delivering  
care to future  
generations

## Student Snapshot

Aisha Oshilaja, DMD24, is passionate about using her platform to eliminate injustice in healthcare. She recently became Engagement Director for the national organization Future Doctors in Politics (FDIP), a non-profit that engages future doctors to ensure that politics and policymaking prioritize patients and the community. Her interest in taking action to address oral health formed as an undergraduate at the University of Pennsylvania where she developed a dental public health volunteer program.

“

Working with FDIP has pushed me to be more aware of underlying practices and policies. This mindset has changed how I approach new and challenging problems.”



## Dear Alumni and Friends,

SPRING IS A TIME of new beginnings, and this spring brings a renewed sense of energy on campus as momentum builds around new initiatives at HSDM. This vitality is reflected in our redesigned magazine that I'm delighted to debut with this issue of the *Harvard Dental Bulletin*, now simply renamed *Harvard Dental*. The new design features a modern look and dynamic layout to reflect our forward-looking school. The magazine showcases stories that capture the essence of the exciting work happening in our clinics, laboratories, and classrooms, and the contributions of our talented faculty, staff, students, and alumni.

In this issue, you'll learn about promising research that bridges the bench and clinic—from the role of stem cells in tooth repair, to futuristic wearable technologies that monitor oral health. Our faculty have been actively collaborating on important research and contributing to national conversations on the state of oral health. Our students have also been engaged in efforts to promote oral health and health literacy. They hosted another successful Give Kids a Smile event that served nearly 50 local families in February.

You'll also meet student recipients of recent scholarships, including the very first recipient of the HSDM Scholars DMD Scholarship—Kailing Ho, DMD22. She will be able to pursue an advanced degree in Periodontology at HSDM and realize her dream



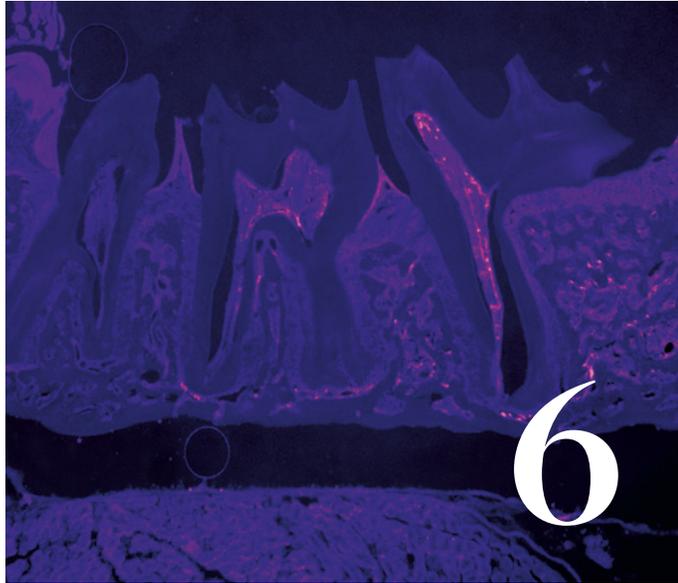
of a career in teaching and research with the support of this critical funding. I'm grateful for our generous alumni and supporters who enable scholarship recipients like Kailing to pursue a broad spectrum of career paths and make their mark in the field. These deserving students represent the future of our profession.

Later this spring, we're very much looking forward to the return of in-person celebrations around Commencement, Reunion, and Alumni Day. We're excited to welcome back young alumni from classes that graduated during virtual Commencement ceremonies in 2020 and 2021, and see alumni from reunion years gather to reconnect and reminisce after several years apart. We have much to catch up on, and I cannot wait to welcome you back to HSDM!

A handwritten signature in black ink that reads "William V. Giannobile". The signature is fluid and cursive, written in a professional style.

WILLIAM V. GIANNOBILE, DDS, DMSC96, PD96  
Dean, Harvard School of Dental Medicine

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**Cover photo**

A DMD student treats a young patient at the Give Kids a Smile event. Photo by: Steve Gilbert

# On Longwood Ave.

## STAFF HIGHLIGHT

### ARTFUL ACCOMPLISHMENT

Three HSDM staff members had their artwork featured recently in the 2022 Harvard Staff Art Show.

The Show celebrates the creative work of Harvard University staff through an online exhibition and in-person shows across the University.

Isabelle Bourdonne, registrar in the Office of Dental Education, and Dawn DeCosta, director of research operations in the Office of Research, both had their paintings featured. Mary Lamey, recently retired senior grant manager in Administration and Finance, had her photography featured.

The HSDM staff members' artwork will be on display at Countway Library through April 19, 2022. Or view their work online at: [staffartshow.harvard.edu](http://staffartshow.harvard.edu).



## CLASS UPDATE

### Making Matches and Moves

In January, DMD students in the Class of 2022 began the final semester of their program and confirmed their post-graduation plans after learning Dental Match results. Several students will be going to universities and medical institutions across the country for residency programs, and others will go into private practice or to pursue other additional degrees, after graduation.

Twelve of the 35 students will go into Oral and Maxillofacial Surgery residencies, six will go into General Practice residencies, or pursue advanced education in General Dentistry, three will go into Endodontics, three into Pediatric Dentistry, two into Orthodontic residencies, two into Prosthodontic residencies, and one will go into a Periodontics residency. Some graduates will serve in the branches of the military and at Veterans Administration Medical Centers, and one graduate will join the National Health Service Corps.

“On behalf of our entire HSDM community, we are so proud of your accomplishments,” Dean Giannobile said during a celebration for the class. “This class has shown great perseverance throughout their four years, but even more so during the pandemic as they have navigated numerous challenges and disruptions to their training. I greatly admire their adaptability, patience, and positivity. These attributes will serve them well as future doctors.”



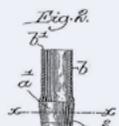
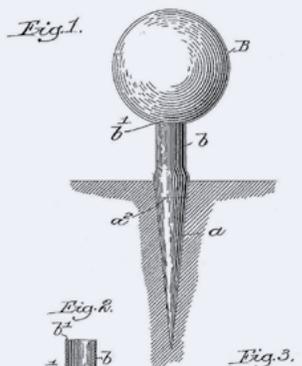
**IN THE NEWS**

**Yankee Ingenuity**

The Boston television show *Chronicle* recently aired a segment on the remarkable life of Harvard School of Dental Medicine (HSDM) alumnus George Franklin Grant, DMD1870, in a show about Yankee Ingenuity. Dr. Grant holds the distinction of being the first African American faculty member of Harvard University and was a well-known inventor who most famously invented and patented the modern-day wooden golf tee.

The show was taped at HSDM this winter and featured an interview with Dr. Brian Swann, interim assistant dean for Diversity, Inclusion, and Belonging. The segment can be viewed on *Chronicle's* YouTube page at [bit.ly/HSDMChronicle](http://bit.ly/HSDMChronicle) (video begins at 3:40).

No. 638,920. G. F. GRANT. GOLF TEE. Patented Dec. 12, 1899. (Appl. filed July 1, 1896.) (No Model.)



Witnesses:  
Fred. A. G. Smith,  
Adolf B. Hauer

Inventor:  
George F. Grant,  
by Crosby & Gregory



**FACULTY HONOR**

**A Fulbright First**

Dr. Mohamed Maksoud, lecturer on Oral Medicine, Infection and Immunity, was recently selected by the U.S. Department of State, Bureau of Educational and Cultural Exchanges, for the Fulbright Specialist Program. He is the first dentist to be chosen for the honor.

The Fulbright Specialist Program provides an opportunity for U.S. academics and established professionals to engage in two-to-six-week, project-based exchanges at host institutions across the globe. The program matches tenured specialists and educational institutions seeking assistance in a specific discipline. Maksoud will serve on the Fulbright Specialist roster for a four-year term.

“Being the first dentist and a periodontist representing dental education in the program is an honor to me. It will grant me the opportunity to represent HSDM in dental schools worldwide,” Maksoud said.

Maksoud, a longtime dental educator who has served in teaching roles with HSDM, Tufts University, the University of Florida, and as a visiting professor at three international dental schools, will pursue global opportunities to contribute to dental curriculum review and advancement. He also hopes to contribute to training opportunities for faculty members in the assessment of competency, and the introduction of student research programs at other institutions.

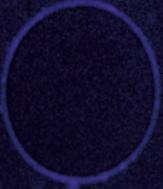
“Throughout my career in academic teaching I have travelled to different countries from all corners of the world and was honored to meet people of different cultures. That experience was fulfilling to me in many aspects,” Maksoud said. “Employing the knowledge from different fields of dentistry, I feel well prepared for the challenging studies and research. My strong desire to contribute to the advancement of dental education has continued to drive me to succeed and to accomplish my goals.”



Research Focus

# Investigating the Role of Stem Cells in Tooth Repair

Dr. Yingzi Yang, professor of Developmental Biology and associate dean for Research, and Dr. Jennifer Gibbs, assistant professor of Restorative Dentistry and Biomaterials Sciences and program director for Endodontics, have been awarded \$200,000 in seed grant funding from the Harvard Stem Cell Institute to investigate how stem cells could play a role in repairing dentin and preserving dental pulp. Their work may offer new biological solutions for those suffering from debilitating dental pain that can occur with deep cavities.



In a molar injury model, Hh responsive cells expand and localize with neurons in response to dentin exposure in vivo.

“As dental cavities progress into the innervated vital pulp, pain and dangerous oral infections can occur,” said Gibbs. “In early studies we’ve seen the potential to identify new signaling pathways to enhance protective dentin formation that could lead to future treatments for biologically-based tooth repair.”

Their study seeks to identify and characterize the dental pulp stem cells (DPSCs) responsible for dentin repair in molar teeth and determine the effect of tooth injury on the expression of Sonic hedgehog (Shh) protein and other reparative signaling factors that can be released from the neurons innervating the dental pulp. The same neurons that can cause pain, when activated can release substances, like Shh, which signal to DPSCs, potentially inducing repair and regeneration of dental pulp and dentin.

“The dental pulp is unique in its capacity for regeneration due to DPSCs. It is densely innervated with sensory neuron afferents, which play a critical role in pulp survival by sensing infection and damage,” said Yang. “Despite the importance of DPSCs and sensory neurons in pulpitis and injury repair, how their regulation can be harnessed to regenerate dentin in vivo remains a critical knowledge gap. Our objective is to identify mechanisms whereby the innervated murine molar dental pulp senses and responds to dentin damage.”

Yang and Gibbs began their collaboration two years ago. Recognizing that tooth pain after dental cavities or tooth fracture is a common problem in dentistry, their interests in dental regenerative medicine, and complimentary research expertise in the Yang and Gibbs Labs, led them to test the hypothesis that pain sensation plays a critical role in injury repair by regulating stem cells.

Postdoctoral scholars Dr. Emily Moore, previously of Dr. Yang’s lab, and Dr. Benoit Michot, of Dr. Gibbs’ lab, were critical to conducting the foundational experiments in support of this hypothesis. The researchers proposed that sensory neurons are critical regulators of stem cell activity and immunological signaling in the dental pulp affected by deep caries. The densely innervated dental pulp has an unparalleled capacity to transmit pain and teeth that have the neurons removed have more rapid progression of pathology in animal tooth injury models. Their hypothesis is derived from compelling preliminary data that activated sensory neurons induce Hedgehog signaling and inflammatory gene expression in murine molar pulp cells. Sonic Hedgehog and calcitonin gene related peptide, an important neuropeptide, both are intriguing targets for activation of stem cells in the dental pulp.



**This has been a terrific collaboration, allowing for the bridging between clinical and basic science expertise.”**

**DR. JENNIFER GIBBS**



Drs. Yingzi Yang and Jennifer Gibbs

“This has been a terrific collaboration, allowing for the bridging between clinical and basic science expertise. It’s wonderful to be supported by the Harvard Stem Cell Institute to further pursue this work,” said Gibbs.

Their research could help identify previously uncharacterized stem cells for natural repair in the molar and novel therapeutic targets to treat dental pain and inflammation while enhancing endogenous mechanisms of dentin repair.

“We’re excited to see where this research will lead,” Yang and Gibbs said. “The ultimate goal of this work would be to reduce painful infections and costly interventions and optimize tooth retention.” ♥



“

My interest in teaching was reinforced here. It would mean a lot to me to be able to pass down the knowledge and skills I learned from my mentors to future students.”

ILING HO, DMD22

Kailing Ho, DMD22, worked as a research assistant in Dr. Andreia Ionescu's lab studying osteoarthritis, before pursuing her DMD degree.

## Giving Focus

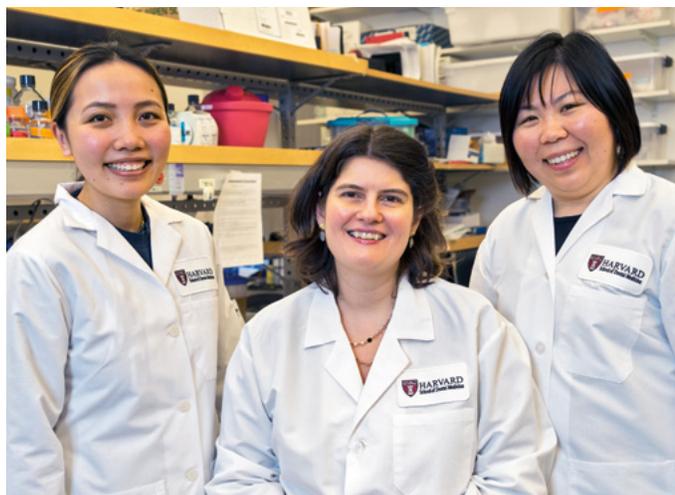
# Finding a Future in Academia

## Scholarship enables DMD graduate to pursue an academic career

KAILING HO, DMD22, dreams of a career where she can combine her passion for patient care, research, and teaching. She doesn't have to look further than her HSDM mentors to see the possibilities that lie ahead.

"At HSDM, we have faculty who are very prolific in the academic field while still being clinicians. This gives me confidence to do the things I want to do," Ho said.

After she graduates in May, Ho will pursue an advanced degree in Periodontology from HSDM. A new scholarship, the HSDM Scholars DMD Scholarship, funded by alumni, friends, and colleagues of former dean Bruce Donoff, DMD67, MD73, will make it possible for Ho to pursue an academic career.



"It definitely is stressful having a full loan burden," Ho said, referring to loans from her DMD program. "It made pursuing an academic career more difficult, fully knowing I had that much potential debt. Having the scholarship gives me more breathing room to ask questions and pursue research beyond my work as a clinician."

"I'm so pleased to see Kailing named as the first recipient of the scholarship," said Dean Emeritus R. Bruce Donoff. "The purpose of the scholarship is to support students who will transform the profession

and think beyond just one facet of it. Her desire to contribute to teaching and research exemplifies this."

Ho's interest in research was sparked well before she started her predoctoral program.

After graduating from Wellesley College, she spent two years as a research assistant in Dr. Andreia Ionescu's lab at HSDM studying osteoarthritis. She initially started in a dual degree DMD/PhD program, but then changed course as her interests expanded beyond the bench.

"During my first year we had the Practice of Medicine course with our medical school classmates and got to do rotations in hospitals. It was then that I realized that the patient-provider interaction is something that I really enjoy," she said.

As she got further into the DMD program, she found a supportive and welcoming environment at HSDM where she could think broadly about her options.

"I've always had a lot of support—whether in the lab or clinic," Ho said. "HSDM faculty are very approachable and generous with their time."

As she had more exposure to instructors in the clinic, she saw the opportunity to share what she was learning with future students. She found role models in Periodontology faculty members Drs. Jennifer Chen, David Kim, and Howard Howell.

She now envisions a future in Periodontology that combines all her interests and allows her to practice in the clinic, pursue translational clinic-based research, and teach students.

She is grateful for the support of the scholarship and hopes to return the generosity by giving back to future students someday.

"I'd like to see the impact of the work I'm doing," she said. "My interest in teaching was reinforced here. It would mean a lot to me to be able to pass down the knowledge and skills I learned from my mentors to future students." ♥



## Research Focus

# Fast Forward

### Futuristic technologies that improve oral health

IN THE NOT-SO-DISTANT FUTURE, wearable devices, artificial intelligence (AI), labs-on-a-chip (LOC's), and camera-enabled toothbrushes may help dentists and their patients manage, or even predict, oral health issues.

Dr. Corneliu Sima, assistant professor of oral medicine, infection and immunity, is a clinician-scientist who has studied several emerging technologies and trends.

“There are at least three directions in which current and developing technologies could help improve oral health,” Sima said. “The first is by analysis of dense data at an individual and population level with AI; the second is by measurements of samples, such as saliva, collected from patients with sensors built on a nanometer scale and microfluidic devices; and the third is by disease monitoring through wearable devices and at-home examination tools.”

As we become accustomed to using our Apple watches and other wearable devices to track the number of steps we take, or monitor our heart rate, it isn't a stretch to envision how this data could be used for oral health.

Sima points out that just as the Apple Watch can gather dense personal data such as heart rate and blood oxygen level at numerous points in time throughout the day, wearable devices have the potential to continuously measure blood glucose levels, helping to monitor diabetes and even identify undiagnosed diabetes.

“This could have extraordinary implications considering that diabetes is a major health problem in the western world. In the U.S. alone, it is estimated that 30 million people have diabetes of whom 7.5 million or 25% remain undiagnosed and are unaware that they have the disease,” Sima said.

“In oral medicine, particularly periodontal medicine, this has significant implications knowing that patients

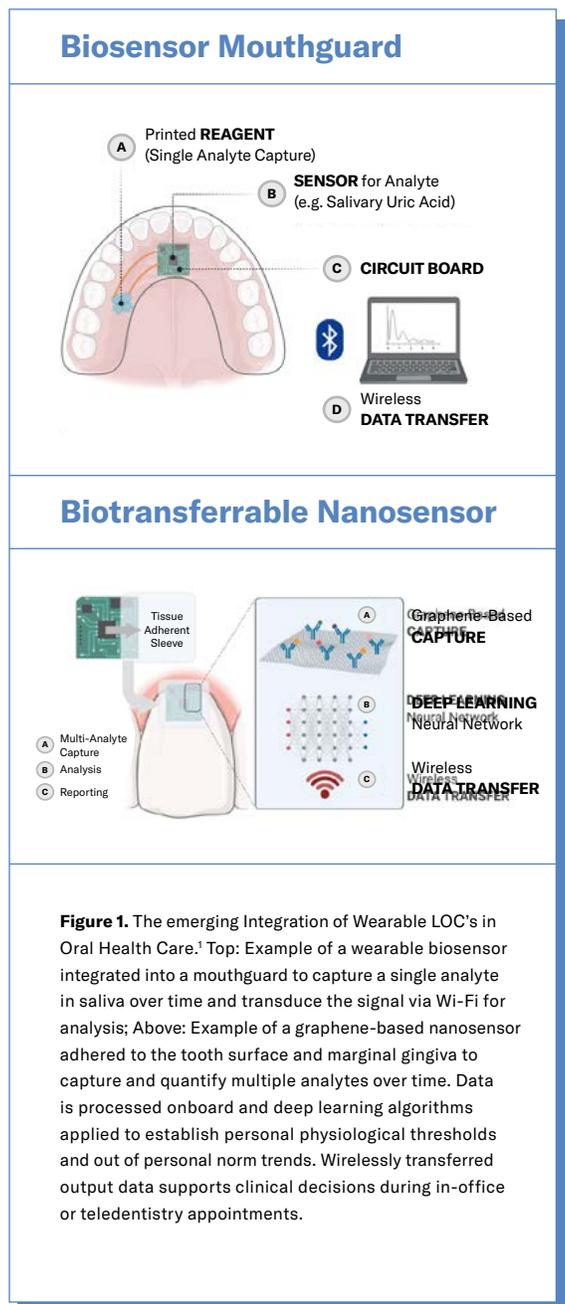
with chronic hyperglycemia are two-to-three times more likely to have periodontitis and its management can improve and control blood glucose levels. Therefore, having access to close monitoring of blood glucose levels recorded by wearable devices could significantly improve the management of periodontitis in a personalized manner and more broadly at population level. Roughly 50 percent of the U.S. population has some degree of periodontitis, in many cases undiagnosed and/or not adequately managed,” he added.

Like a smart watch, but attached to your mouth instead of your wrist, researchers envision a “smart mouthguard” that could be used for oral disease diagnosis and monitoring. Nanosensors and microfluidic chambers could be integrated into mouthguards or via tissue adhesive sleeves (Fig. 1, from<sup>1</sup>) to allow patients to collect data at home and wirelessly upload it via HIPAA-compliant applications into a database accessible by health care providers. AI algorithms could help flag those patients who should be seen in the office for treatment.

“Similarly, camera-enabled toothbrushes could provide clues on oral conditions from the comfort of one’s home. At-home oral image capturing technologies are increasingly being implemented by orthodontists to monitor progress of tooth movement,” Sima said.

Sima also sees many applications for monitoring saliva samples. Saliva carries several biomarkers of both oral and systemic conditions and unique signatures for oral microbiome-host interactions. A multitude of biomarkers are being investigated in saliva to detect diseases such as diabetes and cancer. Wearable sensors could be applied through intraoral devices to measure multiple salivary markers such as metabolic control and inflammatory markers.

“The main advantage of sampling saliva is the ease of collection, which makes it feasible for testing at home and in dental offices where practitioners can get more involved in co-monitoring and managing systemic conditions such as the highly prevalent cardio-metabolic diseases, diabetes, and coronary artery disease,” he said. “We strongly believe that salivary diagnostics have great potential to advance both personalized dental medicine and tighter oral-systemic integration through proactive involvement of dentists in co-management of systemic conditions with their physician colleagues. In the lab and chair-side we are testing both soluble and cellular fractions of saline oral rinses to identify biomarkers that can facilitate this more precise and integrated disease management.”





In Sima's laboratory at HSDM, his research focuses on understanding the way oral innate immune cells maintain normal host-microbiome interactions to prevent and effectively resolve oral inflammatory conditions including periodontitis and other chronic mucosal diseases. Sima and his team study the body's ability to effectively use inflammation to maintain balance in interactions with foreign microbes. One critical aspect in this process is the ability to resolve inflammation before it is detrimental to the body to the point of irreversible damage that cannot be recovered by physiological regeneration.

"As a clinician-scientist, I have a strong motivation to see our discoveries applied in real-life practice to improve the oral health at both an individual and

population level," Sima said. "When I mentor students and residents, I often emphasize that with each discovery two doors open: one that brings more questions to be answered by further basic research, and one that allows us to see how we can incorporate it into clinical decision-making and therapeutic protocols. We tend to focus on the latter, to advance translation of basic science findings into clinical practice." ♥

Dr. Sima works with a visiting researcher in his lab.

1 Steigmann L, Maekawa S, Sima C, Travan S, Wang C, Giannobile W. Biosensor and Lab-on-a-chip Biomarker-identifying Technologies for Oral and Periodontal Diseases. *Frontiers in Pharmacology* 2020; 11:588480.

## Faculty Focus

# Dr. Sercan Akyalcin Tapped to Lead Orthodontics

DR. SERCAN AKYALCIN joined Harvard School of Dental Medicine's Department of Developmental Biology in early March as a member of the faculty and program director for Advanced Graduate Education (AGE) in Orthodontics.

"Dr. Akyalcin was chosen for this important role for his vision and enthusiasm as a leader in the field of Orthodontics," Vicki Rosen, professor and chair of Developmental Biology said. "He will bring innovation to the program, mentor advanced graduate students and faculty, and establish cutting-edge translational research in orthodontic-related areas."

“  
**Dr. Akyalcin was chosen for this important role for his vision and enthusiasm as a leader in the field of Orthodontics.**”

**DR. VICKI ROSEN**

Akyalcin, a native of Turkey, received his DDS and PhD degrees from Ege University School of Dentistry. Soon after completing his PhD degree, he began his teaching career in Canada. He then went on to receive his clinical training in the Orthodontic Program at The University of Texas Health Science Center in Houston. He also served as the Bonham Magness Endowed Professor and Graduate Program Director at the same institution until 2016. Since 2016, he was a faculty member at Tufts University School of Dental Medicine



in Boston, where he most recently served as interim chair and graduate program director of Orthodontics.

In his career as a dental educator and orthodontist, Akyalcin has published numerous peer-reviewed papers, contributed to published books and textbooks, and serves on the editorial boards of orthodontic and dental journals. He has been recognized with several awards in the field, including recognition from the American Association of Orthodontists, and the 2019 Edward H. Angle Research Prize. He is a sought-out speaker at national and international forums and conferences for his expertise in the field.

"We are enthusiastic about Dr. Akyalcin joining us at HSDM," Dean William Giannobile said. "His excellent national reputation and emphasis on clinical care and scholarship make him a strong addition to HSDM's Orthodontics program."

At HSDM, Akyalcin will oversee all aspects of the AGE Orthodontics program including the recruitment and admission of highly qualified applicants; academic and clinical aspects of residents' research projects; the recruitment of part-time faculty; and program-specific curriculum and accreditation standards.

"It is a privilege to be recruited to HSDM by globally influential leaders like Dean Giannobile and Dr. Rosen at a time when many stressors are present in healthcare education. Our role as educators is to emerge as bold and forward-thinking leaders at this time of inevitable change and create the future," Akyalcin said. "I look forward to joining Dean Giannobile's brilliant vision and connecting with the HSDM community." ♥

## Giving Focus

# Breaking Down Barriers

Periodontology fellowship recipient inspired to improve health disparities

CORINTHIA WILKERSON, MMSC24, is passionate about using her dental career to give back to others. The first-year resident in Harvard School of Dental Medicine's Periodontology program hopes to use her knowledge of periodontology, public health, and health

policy to help historically marginalized communities, by educating and providing care to treat those with periodontal disease—all while training the next generation of periodontists. Support from HSDM's Periodontology Fellowship is helping her pursue her dreams.

Wilkerson earned her BS in Biology from Spelman College where she was introduced to dentistry through her professor's non-profit organization, Increasing Diversity in Dentistry, leading to a turning point in her professional pursuits. Shortly after, a foot surgery which resulted in post-operative complications and three months of bed rest, postponed her dental pursuits. But through this difficult time, she persevered by studying for the Dental Admissions Test

and preparing for graduate school. Wilkerson received her MS in biomedical sciences with a concentration in oral biology from the University of Medicine and Dentistry of New Jersey—formerly known as Rutgers

University. Soon after, she received her DDS from Meharry Medical College (MMC) School of Dentistry, as well as certificates in public health and health policy.

"I was admitted to the MMC School of Dentistry with a personal goal of learning as much as possible and becoming competent and proficient in the dental sciences," Wilkerson said.

At MMC, she was involved with the Pre-Alumni Association and led efforts to promote and enhance the relationships of students and faculty, as well as to serve as an advocate for students with the college's administration. She was driven to be a part of the rich history and legacy of one of the only two dental schools affiliated with Black colleges and universities in the nation. Wilkerson currently serves as a Young Alumni Trustee for MMC, as well as a member of the PULSE Board of Directors for Middle Tennessee American Heart Association.

Her interest in periodontology developed through her own experience of wound healing and understanding of health disparities and barriers of treatment. That ambition for knowledge led her to HSDM.

“

**Understanding the importance of philanthropy, I am committed to giving back to the schools that gave me so much.”**

**DR. CORINTHIA WILKERSON, MMSC24**

"HSDM's Periodontology program has a legacy of training specialists that not only excel academically and clinically, but they are also leaders in higher education administration," said Wilkerson. "As I continue to learn more about Periodontology, I am looking forward to using the lessons and experiences from previous research opportunities to identify how I will continue to make positive contributions to my chosen specialty."

The fellowship will help fund a portion of Wilkerson's tuition in the program. "Understanding the importance of philanthropy, I am committed to giving back to the schools that gave me so much. The Perio Fellowship will aid in decreasing the amount of loans I will have to repay and assist me on the road to achieving my financial goals as well as supporting my postdoctoral education." ♥





Many Messages But  
Only One Goal!  
We want to help you and your  
child have a great dental experience!  
We'll be here to help you and your  
child every step of the way!

**Give Kids a Smile!**  
2022

**HSDM**

Give Kids a Smile!  
We'll be here to help you and your  
child every step of the way!

Give Kids a Smile!  
We'll be here to help you and your  
child every step of the way!

## Student Focus

# Delivering Care to Future Generations

NEARLY 50 SMILING PATIENTS received care at Harvard School of Dental Medicine's recent Give Kids a Smile (GKAS) event. The event, held annually in February during Children's Dental Health Month, offers free dental care to children ages one to 17.

Student organizers Stephanie Yang, DMD24, and Kadriye Hargett, DMD24, planned and promoted this year's event working closely with faculty and student volunteers. Although COVID-19 restrictions were still in place, the team made sure the event was a success with social distancing in effect, and additional PPE equipment provided for all patients and their parents.

"Give Kids a Smile has become an annual tradition to host at HSDM, and for good reason too," said Yang. "By being a part of GKAS, we get the opportunity to not only deliver care and help connect patients to a dental home, but also gain a better understanding of the community we plan to serve in the future."

Nearly 50 volunteers consisting of student dental providers, student assistants, oral health care education volunteers, and Operation Mouthguard volunteers were on hand to treat patients and promote oral health



education. Several faculty, staff, and Advance Graduate Education (AGE) residents were also there to oversee care.

GKAS also offered an educational component this year. Dental students created interactive oral health education stations for children to learn how to brush their teeth and floss properly. A face painting station was also included in the festivities.

"We hope that by educating patients on proper oral hygiene and the link between diet and oral health, we will equip these patients with daily tools for preventing dental disease," said Hargett.

In addition to routine check-ups and x-rays, patients were also fitted for custom-made mouthguards through HSDM's Operation Mouthguard initiative. The initiative aims to reduce the risk of sports-related oral injuries by providing mouthguards to young athletes in the Boston area who might not otherwise have this crucial protection.

"All in all, we are so grateful to be able to continue providing care for our pediatric population through Give Kids a Smile," Yang said. "This is a tradition that has been so special to the HSDM community every year and I hope to be a part of it for all my four years as a pre-doctoral student at HSDM." ♥

Dental students and faculty provided free dental care to children ages one to 17 during the annual Give Kids a Smile event in February.



## Student Focus

# More Than Teeth

What your dental team wants you to know about health misinformation

By Franklin Zhang, DMD23

HAVE YOU EVER HEARD it's okay to whiten your teeth with charcoal or fix your teeth at home with a nail filer? I sure hope not...but many believed this due to health misinformation.

### What is Health Misinformation?

Health misinformation is a health claim based on false knowledge. In many cases, people don't realize it's wrong, but it does not need to be intentional.

The Internet era has brought endless information to our fingertips. However, how people use this information varies. Users often skim and share content without checking the accuracy. "Information overload" and overstated titles allow people to more quickly believe news that confirm their beliefs. Sometimes, messages conflict, confusing patients and making it difficult for them to act.

### Health Misinformation and Social Media

Social media is a major way of spreading health misinformation. Twitter, for instance, shares 500 million posts each day. In a wink, one such post can shoot around the world. Anyone can voice their thoughts on these platforms. They are sometimes true, sometimes not.

Last year, a social media craze emerged where teens ground down their teeth with nail filers to fix "some ridges." This act

is damaging and shaves off enamel, which serves as our teeth's protective coating. Enamel shields teeth from sensitivity to cold drinks and ice cream. This trend was not backed by science and happened during the COVID-19 pandemic when dental offices were closed, allowing this falsehood to spread widely.

### Health Misinformation and Community Water Fluoridation

Health misinformation can delay disease control. We have seen this with our ability to control the spread of COVID-19. We have also seen this with community water fluoridation and controlling cavities. The use of fluoride, a mineral found in nature that makes your bones and teeth strong, has been proven to reduce the risk of cavities by 25%. The CDC named it one of the top ten public health feats in the past century.

Yet today it is still a heated topic. Twenty-eight percent of families still lack access to fluoride adjusted water, largely because of misinformation. Some people against fluoridation claim it puts people at a higher risk for heart disease and cancer. One town, Holmen, WI, even ended fluoridation in 2008 because a city council member felt convinced it was harmful for people. Stories like this are more common than we think and prevent the public from getting this crucial cavity-preventing tool.

### How Can Patients Sift Through Fact or Myth?

It is key to help individuals recognize misinformation and make choices based on facts.

Here are some pointers:

- Keep a healthy level of doubt when hearing overly simplified or shocking health accounts.
- Check the date to make sure you are reading up-to-date materials. Bear in mind that people share invalid sources more often than science-based ones.
- Cross-check information with multiple sources. If you are unsure if it's truthful, avoid sharing it.
- Use website add-ons that look into the source's credibility.
- Learn about dental topics from ADA's Mouth Healthy and health topics from the World Health Organization.

Each of you plays a role in tackling health misinformation. Still, more needs to be done than just at the individual level. Public health officials or system-wide efforts can help. Executives can regulate news outlets and social media better. Accurate general health information should be easier to obtain.

Visit your dental office to maintain routine cleanings, oral cancer screenings, and dental exams. While we are still in a pandemic, all dental clinics are taking steps to make sure that patients can see dentists safely. Your dentist will direct you to gaining the best resources and recommendations for your oral health.

Spreading facts can save filed teeth and improve overall lives.

*Zhang's essay was the runner up in this year's ADA Health Literacy in Dentistry Essay Contest. For this achievement, he will receive a \$500 prize. ♥*



Franklin Zhai

HARVARD  
School of Dental Med.

FIGS

## Faculty Focus

# Examining America's Oral Health

A NEW REPORT EXPLORING America's oral health over the last 20 years includes noteworthy contributions from 15 current and former Harvard School of Dental Medicine (HSDM) faculty members.

"Oral Health in America: Advances and Challenges" is a sweeping effort to tell the whole story of the state of oral health in America. Widely considered the most comprehensive evaluation of oral health currently available in the U.S., the report shows that oral health plays a central role in overall health.

Facilitated by the National Institute of Dental and Craniofacial Research (NIDCR) at the National Institutes of Health (NIH), along with hundreds of leading dental experts, the report is only the second

comprehensive document on this topic and the first in more than 20 years. Following-up on "Oral Health in America: A Report of the Surgeon General," published in 2000, the new report provides guidelines on how to improve the nation's oral health.

The 790-page report draws primarily on information from public research and evidence-based practices to include six sections: the effects of overall oral health on individuals, communities, and the economy; oral health across lifespans; oral health workforce and practice; relationships between mental health and oral health; and emerging science and technology to transform oral health.

In addition to major takeaways from the report, the authors added numerous calls to action, which include changes to policy to improve the nation's oral health, the need for health care professionals to work together to provide integrated care for the community, and developing a more diverse oral health care workforce.

William Giannobile, DMSc96, PD96, dean of HSDM, and Israel Agaku, lecturer on Oral Health Policy and Epidemiology, served as editors for sections of the report.

Other contributing authors from HSDM included:

Jane R. Barrow, SM87, director for Global and Community Health; Steffany Chamut, instructor in oral health policy and epidemiology; John D. Da Silva, DMD86, MPH87, PD89, PD91, SM92, associate professor of Restorative Dentistry and Biomaterials Sciences and associate dean for faculty affairs and development; R. Bruce Donoff, DMD67, MD67, dean emeritus and Walter C. Guralnick Distinguished Professor of Oral and Maxillofacial Surgery; Chester Douglass, professor emeritus of Oral Health Policy and Epidemiology; German O. Gallucci, chair and Raymond J. and Elva Pomfret Nagle Associate Professor of Restorative Dentistry and Biomaterials Sciences; Man Wai Ng, PD93, MPH96, associate professor of Developmental Biology; Christine Riedy, chair and Delta Dental of Massachusetts Associate Professor of Oral Health Policy and Epidemiology; Brittany Seymour, MPH11, associate professor of Oral Health Policy and Epidemiology; Lisa Simon, DMD14, PD15, MD20, fellow in Oral Health and Medicine Integration; Nathaniel S. Treister, DMSco5, associate professor of Oral Medicine, Infection and Immunity; Constantine Ilias Vardavas, lecturer on Oral Health Policy and Epidemiology; and Alessandro Villa, PD13, lecturer on Oral Medicine, Infection and Immunity.

The report will be used by health professionals and scientists to identify areas of need and develop programs to improve the oral health of America. ♥



# News & Notes

## Alumni Updates

**Thomas B. Dodson, DMD83, MPH84**, was appointed as editor-in-chief for the *Journal of Oral and Maxillofacial Surgery*. His appointment began in January 2022.

**James Hupp, DMD77**, received a Board of Trustees Special Citation Award for significant, long-standing contributions to the specialty at the American Association of Oral and Maxillofacial Surgeons 2021 national meeting. Dr. Hupp was recognized for his long tenure as editor-in-chief of the *Journal of Oral and Maxillofacial Surgery*. He also served as a director and president of the American Board of Oral and Maxillofacial Surgery. Dr. Hupp was dean of the University of Mississippi School of Dentistry and founding dean of the School of Dental Medicine of East Carolina University. He currently is a senior associate dean of the new College of Medicine of Washington State University.



**Cataldo Leone, DMSc89, PD89**, was recently named dean of Boston University's (BU) Henry M. Goldman School of Dental

Medicine. Leone is an expert in periodontal disease and is well-known for his contributions to dental education and curriculum design over his lengthy career in academia. He has served in teaching

and administrative roles at the University of Florida, Tufts University, and at BU where he has taught for more than 20 years, most recently serving as the dental school's interim dean.

**Nisarg Patel, DMD18, MBI19**, was recently named in *Forbes* "30 under 30" to watch in healthcare. Patel is co-founder of AI startup Memora Health, an automated platform for healthcare management and patient communications.



↑ **Quang Do, DMD21, Daniel Bienstock, DMD11, and Michael Forman, DMD16**, recently reunited in the Operating Room at Columbia New York Presbyterian Hospital. Currently of the twelve oral surgery residents in the training program, five are from HSDM.

**Kimberley Wu, DMD10**, and her husband **Peter Joe, PD08**, have opened several successful practices in the Los Angeles area with four pediatric practices and three orthodontics practices.



↑ HSDM reunions happen everywhere. **Lauren Hum, DMD16, Lisa Lian, DMD16, and Raina Chandiramani, DMD16**, recently got together for a trip to the Desert Botanical Gardens in Scottsdale, Arizona.

**Vlad Shuster, DMD05**, and his wife, **Karindeep Chima, DMD05, MMSc08**, have two successful private practices in the San Francisco area with one specializing in endodontics and the other in orthodontics.

↓ **Chloe Wong, DMD18** and **George Chen, DMD17**, who met at HSDM as predoctoral students, recently got engaged. Both are now pediatric dentists and live in Ohio with their two dogs.



## Faculty News

**Sung Choi**, instructor in Oral Health Policy and Epidemiology, received funding from the National Institute of Minority Health and Disparities for her study “Reducing Oral Health Disparities in Children Using Predictive Analytics and Mathematical Modeling.” For this project, Dr. Choi will investigate the influence of race/ethnicity on progression of dental caries, identify modifiable structural risk factors of disparities in quality of dental care, and assess the cost-effectiveness and value of dental care, incorporating racial/ ethnic disparities in the assessment of value.

**Meghan Cooper, DMD11, MMSC14**, has joined the Endodontics faculty as a part-time instructor. Cooper is an alumna of HSDM. She will be teaching in the Advanced Graduate Education (AGE) Endodontic clinic.

**William Giannobile, DMSc96, PD96**, was named the recipient of the 2022 International Association for Dental Research (IADR) Distinguished Scientist Research in Periodontal Disease Award. The Award recognizes his significant contributions to the field of oral health research.

**Anne Koch** was appointed as a part-time faculty lecturer on Endodontics. She was a previous program director of AGE Endodontics. She will be working on preclinical endodontic instruction, lectures, and providing case-based instruction for Endodontic residents.

**Paul A. Levi, Jr.** received a Doctor Honoris Causa, the highest academic distinction from the Universitat Internacional de Catalunya (also referred to as The International University of Catalonia), a private university located in Barcelona. He is a part-time lecturer on Oral Medicine, Infection and Immunity, and has taught at HSDM since 1994.

**Hiroe Ohyama, MMSc96, DMD03**, assistant professor of Restorative Dentistry and Biomaterials Sciences, was selected by the National Dental Honor Society, Omicron Kappa Upsilon, as the 2022 recipient of the Stephen H. Leeper Award for Teaching Excellence. The award recognizes dental educators who have displayed exemplary standards in dental pedagogy while demonstrating vision and advancement in dental education. It honors individuals who have implemented innovative techniques or displayed excellence in dental education, and who have instituted creative and unique methods of educating and engaging students, faculty, and administrators.

**Shibani Sahni, MMSc21**, was selected as the winner of a 2021 Teledentistry Innovation Award. The Award spotlights providers and programs breaking new ground and using teledentistry technologies in ways that are transforming care.



## In Memoriam

**Ray Williams, PD73**, distinguished HSDM alumnus, former faculty member, and leading researcher, passed away October 28, at the age of 77.

Ray served as associate dean for postdoctoral education at HSDM, and head of the Department of Periodontology until 1994. He made numerous contributions to the field, training hundreds of students in the specialty who have gone on to serve in leadership roles in academia, private practice, and industry. His research led to historic discoveries in the field—demonstrating that the control of gingival inflammation can significantly deter disease progression toward periodontitis. These trials in the 1980s and 1990s led to the eventual recognition, in 2008, of periodontitis as an inflammatory disease. He was also instrumental in the pioneering work led by HSDM on the introduction of growth factors for the regeneration of lost support around teeth and dental implants. These biologic agents are now used clinically to treat patients affected by periodontal diseases.

A dedicated educator, he went on to serve as distinguished professor and chair of the Department of Periodontology at the University of North Carolina Adams School of Dentistry, and he was later recruited to Stony Brook University where he served as dean of the School of Dental Medicine. He was the recipient of many prestigious awards in his lifetime including the Goldhaber Award, the American Academy of Periodontology’s (AAP) Outstanding Educator Award, as well as the AAP Gold Medal, the highest award to be bestowed on a member of the Academy.

Together with his late wife, Joan Lash, and Dr. Howard Howell PD76, AM98, and Jeff Stevens, Ray established the Lash-Williams-Howell-Stevens Fund for Periodontology Fellowship Support to support periodontology students at HSDM. Gifts in memory of Ray may be directed to this fund <https://hsdm.harvard.edu/williamsfund>.



↑ Several Periodontology faculty, students, and alumni were recognized at the American Academy of Periodontology Annual Meeting in Miami. **Thomas Van Dyke** was recognized with a Distinguished Scientist Award; **David M. Kim, DMSc05**, received a Clinical Research Award; **Chiho Ahn, DMSc21**, received the Dr. D. Walter Cohen Teaching Award; **Lorenzo Tavelli** was named a clinical science research poster finalist and served as a Rising Star Session speaker; **Shaima Bahammam, DMSc22**, received a basic science research poster award.



**Reshma Menon, DMSc17**, lecturer on Oral Medicine, Infection and Immunity, was promoted to the role of society director in January. In this role, she

will work closely with predoctoral students guiding them through their academic and clinical development.

**Sook-Bin Woo, DMD89, MMSc91, PD91**, professor of Oral Pathology in the department of Oral Medicine, Infection and Immunity and Associate Surgeon at

Brigham and Women’s Hospital, has been appointed lead of the Head and Neck Oncology Program in the new Dana Farber Cancer Institute, Center for Early Cancer Detection and Intervention.

↓ **Hend Alqaderi**, lecturer on Oral Health Policy and Epidemiology, received the L’Oréal-UNESCO for Women in Sciences award for her research, “Salivary Host Immunity and Oral Microbiome Markers in SARS-CoV2.” She has also been recently appointed as interim director of HSDM’s advanced graduate education program in Dental Public Health.



## Student News



**Lama Alabdulaaly, DMSc21**, an AGE student in the Oral Medicine program, received the Oral Medicine Residents Research Award from the

American Academy of Oral Medicine Research Advancement Committee to fund her research “Transcriptomic Profiling of Marrow Adipose Lineage Precursors Lacking Parathyroid Hormone Receptor.”



**Elizabeth McGough, DMD22**, was awarded the American College of Dentists Outstanding Student Leader Award. The award

is intended for a student who represents ACD’s principles of high achievement, strong leadership and high ethical standards. McGough exemplified these *Continued on following page*

qualities as her Class Curriculum Committee Representative for the past four years. She worked closely with her classmates and faculty members of the curriculum committee to adapt the curriculum at a time when we needed to shift to a completely remote learning experience. Her leadership was equally valued by both the faculty and her classmates.



**David Wu, DMSc23**, an AGE student in Periodontology, was selected for the Osteology Foundation's Young Researcher Grant program.

The grant will help fund the cost of his DMSc thesis research. His proposed project is titled: "Hydrogels with tunable stress relaxation control fusion of MSC spheroids for bone formation." Co-investigators of his study are Dr. Mani Diba, PhD, and Prof. David J. Mooney, PhD, from Harvard John A. Paulson School of Engineering and Applied Sciences, and Wyss Institute for Biologically Inspired Engineering.



**Sophia Yang, DMD24**, was selected for a 2022-23 national leadership position with the American Student Dental Association (ASDA). ASDA's Board of

Trustees appointed Yang to the position of Editorial Board Contributing Editor. She was chosen from a competitive field of extremely qualified national candidates and will play an important role in achieving the association's goals for the coming year.

## HSDM News

**Jillian Bianco** transitioned into a new role as programs and outreach coordinator within the Office of the Dean. She previously served for five years as facilities coordinator within the Office of Administration and Finance. Bianco will provide support to strategic programs, internal outreach, and School-wide events and community-building efforts sponsored by the Dean's Office.

**Heather Cappello** returned to HSDM to serve as the development coordinator in the Office of Development and Alumni Relations. She previously worked at HSDM from 2016-2019, and prior to that at Harvard Medical School in the Development Office as a Business Analyst. She is responsible for gift processing, stewardship, and events.

**Christina Cassano**, formerly program coordinator for the Office of Global and Community Health (OGCH) and the HSDM Initiative to Integrate Oral Health and Medicine (Initiative) at HSDM, has transitioned to serve as department administrator for the Department of Oral Health Policy and Epidemiology (OHPE). Cassano will provide administrative leadership and project management support to OHPE as well as serve as a strategic, collaborative partner and advisor to OHPE leadership, faculty, and staff.

**Lindsey Curley** joined HSDM as the associate director of annual giving and alumni relations with responsibilities for annual giving, alumni outreach, engagement, and events. Most recently, Curley served as assistant director at the Harvard Alumni Association, leading the efforts for 50 Clubs west of the Mississippi and in Canada, Shared Interest Groups, partnering with faculty speakers, and planning events with alumni around the world.

**Mayra Natareno** joined HSDM as human resources coordinator. Natareno came from Brown Physicians Inc. where she provided support to six

foundations which include Brown Medicine, Brown Emergency Medicine, Brown Dermatology, Brown Surgical Associates, Brown Urology, and Brown Neurology. She will provide a wide range of employment-related services across all areas of the School.

**Kathleen Refior** joined HSDM as digital communications coordinator. Most recently she served as marketing specialist at Western Michigan University (WMU) for the College of Arts and Sciences. At HSDM, she is responsible for the development of digital content such as news stories, videos, social media posts, and website updates. She also contributes to HSDM's print and electronic publications, as well as promotional materials and multimedia.



**Judith Vance**, director of Human Resources, was awarded the 2022 Sharon P. Clayborne Staff Diversity Award. This Award was established to

recognize and celebrate staff who have made significant achievements in moving Harvard Medical School and Harvard School of Dental Medicine towards being a diverse and inclusive community.

**Raymond Windsor** was named as the new executive assistant to the Dean. He joins HSDM from Brown University where he most recently served as office manager and executive assistant to the Dean of Brown's Graduate School. He brings over 20 years of combined experience in academia, hospitality, and the arts. Windsor provides advanced administrative, calendar, and project management support to the Dean and serves as a central liaison to internal and external constituents.

# Upcoming Events

**April 28**

## Endodontics Alumni and Friends Dinner

AAE 2022 CONFERENCE  
PHOENIX, AZ

**May 12, 12pm**

## Science Speaker Series

Yuji Mishina, PhD, professor of Dentistry, Department of Biologic and Materials Sciences & Prosthodontics, University of Michigan  
ZOOM WEBINAR

**May 21, 7pm–9pm**

## American Association of Orthodontists Annual Session HSDM Alumni Reception

LOEWS MIAMI BEACH  
1601 COLLINS AVENUE  
MIAMI BEACH, FL

**May 26**

## Class of 2022 Commencement and Class Day

HARVARD YARD AND HMS QUAD

**May 29**

## Classes of 2020 and 2021 Commencement

HARVARD YARD AND HMS QUAD

**Friday, June 3, 2022, 10am–12:30pm**

## HSDM Alumni Day

FOUR SEASONS HOTEL BOSTON  
200 BOYLSTON STREET, BOSTON, MA

### HSDM Alumni Day Symposium:

*The future of dental education: How will it shape the clinician of tomorrow?*

#### Keynote Speaker:

Linda C. Niessen, DMD77, MPH77, MPP82, PD82  
Founding Dean, Kansas City University College of Dental Medicine  
Vice Provost for Oral Health Affairs, Professor

#### Moderator:

Leila Jahangiri, MMSc95, PD95, DMD97  
Ira E. Klein Professor and Chair of the Department of Prosthodontics, New York University College of Dentistry

#### Panelists:

William V. Giannobile, DMSc96, PD96  
Dean, Harvard School of Dental Medicine

Nadeem Karimbux, DMD91, MMSc93, PD93  
Dean, Tufts University School of Dental Medicine

Cataldo Leone, AB78, DMSc89, PD89  
Dean, Henry M. Goldman School of Dental Medicine, Boston University

*Please note there is a fee to register for Alumni Day this year.* Online registration closes May 26, 2022. For questions about any alumni events, please contact Lindsey\_Curley@hsdm.harvard.edu

*Please visit [hms.harvard.edu/aad-events](https://hms.harvard.edu/aad-events) for the latest COVID-19 vaccination requirements and policies prior to attending.*

**June 3–4, 2022**

## HSDM 2022 Reunion

FOUR SEASONS HOTEL BOSTON  
200 BOYLSTON STREET  
BOSTON, MA

Register for reunion at:

<https://alumni.hms.harvard.edu/attend/reunion>.

Online registration closes May 26, 2022.

**June 6–8**

## Continuing Professional Education: Innovative and Effective Team Collaboration in Multidisciplinary Therapy

HARVARD SCHOOL OF DENTAL MEDICINE  
188 LONGWOOD AVE.  
BOSTON, MA

**June 9, 12pm**

## Science Speaker Series

Wanida Ono, DMSc14, assistant professor of Dentistry Department of Orthodontics & Pediatric Dentistry, University of Texas Health Science Center  
ZOOM WEBINAR



SEE A FULL LIST OF EVENTS AT:  
[HSDM.HARVARD.EDU CALENDAR](https://hsdm.harvard.edu/calendar)



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**Harvard School of  
Dental Medicine**

# Alumni Day

Friday, June 3

Renew bonds with your fellow alumni,  
get updates on the School's priorities,  
and hear about the future of dental medicine.

Register and learn more  
[hsdm.harvard.edu/alumni-day-2022](http://hsdm.harvard.edu/alumni-day-2022)

ENGAGE

ALUMNI  
DAY

RETURN

CONNECT

DISCOVER