

DR. ESRA SAHINGUR

IN THE NEW ROLE OF ASSOCIATE DEAN OF GRADUATE STUDIES AND STUDENT RESEARCH, DR. SAHINGUR IS EAGERLY TAKING UP THE TASK TO HELP SUPPORT STUDENTS' RESEARCH INTERESTS

THERE ARE A NUMBER OF REASONS why joining Penn Dental Medicine was an attractive opportunity for Esra Sahingur, DDS, MS, PhD, who in September took on the newly created role of Associate Dean of Graduate Studies and Student Research and also joined the Department of Periodontics as Associate Professor.

"Penn Dental Medicine is a great school, world-renowned with a lot of resources," says Dr. Sahingur. And when she met with Morton Amsterdam Dean Mark Wolff to discuss the position, "he shared my vision to enhance programs to involve students with more research and scholarly activities and provide the resources to make it happen."

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OPPOSITE: Esra Sahingur, DDS, MS, PhD, joined Penn Dental Medicine in September in the newly created role of Associate Dean of Graduate Studies and Student Research; she is Associate Professor in the Department of Periodontics.

Furthermore, she says, "The responsibilities of this new role aligned perfectly with my career path." For the previous 13 years, Dr. Sahingur had been a professor, researcher, and active mentor at Virginia Commonwealth University (VCU) School of Dentistry, where she most recently served as Professor in the Department of Periodontics.

"We are thrilled that a world-class scientist and educator like Dr. Sahingur has joined us at Penn Dental," says Dean Wolff. "This new Associate Dean role will help provide strategic vision and leadership to support and expand student research endeavors and the graduate studies at the School, and I know Dr. Sahingur's commitment and engagement as a mentor, educator, and researcher will be a great asset to our current and future students."

Now settling into her role at Penn Dental Medicine, Dr. Sahingur says one of her priorities is to "find ways to inspire next-generation clinicians and scientists who will be the leaders of our profession and further the legacy of Penn Dental Medicine."



“There is a huge decline in the number of dental professionals pursuing advanced graduate degrees and staying in academia, leading to a shortage of faculty,” she says, citing a 2018 American Dental Education Association report. “My goal is to bridge the gap between clinical and basic sciences and work closely with faculty and students to train not only competent clinicians, but also future scientists and scholars.”

One way to facilitate that goal is by bringing existing student research programs at Penn Dental Medicine under one umbrella through her office. “It will be more efficient to facilitate the delivery of knowledge and make it a more productive experience for students and faculty,” Dr. Sahingur says. “My first goal is to increase communication between disciplines.”

She stresses that faculty play a big part in engaging students in research methodology, publishing manuscripts, and presenting at professional conferences. “There are many ways one can be involved in shaping the future of our profession, and part of our job

as educators is to make our students aware of these areas and promote academic careers by creating opportunities to be involved in scholarly activities.”

Eagerly taking up that task, she is working closely with faculty to build student interest and involvement in the two main research programs at the School for DMD students — the School’s long-standing Summer Research

Program. The popular Research Honors Program is open to incoming, first- or second-year students who plan, implement, and execute a hypothesis-driven research project over a one-to-two year period in conjunction with a faculty mentor. Each year, three to six students are being admitted to the program. Students in both programs present their work at the School’s annual Research Day.

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Program and the Basic & Translational Research Honors Program. In the competitive Summer Research Program, students work full time in July and August with a faculty advisor on a mutually agreed upon research project. Presently, eight to 12 students are selected each year for the Summer Research

“These well-established programs are providing unique research opportunities for our DMD students,” notes Dr. Sahingur. “My goal is to work with our faculty to help build upon them and engage students more in research activities based on their interests so they are curious and excited about the studies they are conducting. I want our students

to feel part of the research teams, authoring manuscripts and presenting on national and international platforms.”

Her other main responsibility as Associate Dean is oversight of graduate research programs, and Dr. Sahingur is working with the faculty to develop several new programs targeting different groups of students, including some for predental and foreign-trained dentists seeking to enter dental schools and others that would offer advanced degrees for those in clinical specialties.

As hybrid programs that would include both online and in-class settings, she says some of these new programs “would be the first of their kind both at Penn Dental Medicine and nationwide.”

She is particularly interested in the integration of disciplines and wants to encourage students to consider combined degree programs — whether one of the eight dual-degree programs presently available to DMD students at Penn Dental Medicine or the MSOB or DScD programs for postgraduate students. A multidisciplinary education will make it easier for graduates “to tackle problems for better health, not just oral health,” says Dr. Sahingur.

“For dentists to continue to deliver cutting-edge research and be part of decision-making in science and health care policy, we need to inspire and educate next-generation clinician-scholars and cultivate a culture for curiosity, forward thinking, and active learning,” Dr. Sahingur says. “This will ensure our profession is leading in the introduction of new advances and evidence-based practices.”

Dr. Sahingur believes Penn Dental Medicine, with strong leadership, an accomplished faculty, and highly engaged alumni, is in an excellent position to leverage existing and newly developed programs and educate future academicians.

INSPIRATION FOR ACADEMIA

Dr. Sahingur’s journey to West Philadelphia started in her hometown of Istanbul, Turkey, where her father, who died when she was 11, was a physician and scientist at Istanbul University. “He was my inspiration for academia,” she says.

After earning her DDS at the Istanbul University School of Dentistry in 1994, she continued her postgraduate training in the United States at the State University of New York at Buffalo, where she earned her MS in Oral Sciences and Microbiology in 1999 and her PhD in Oral Biology and Immunology, as well as a clinical certificate in periodontology, in 2004.

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“I always had an eye for academia during my dental school years, but it was my education and experiences at the State University of New York at Buffalo that shaped my career path as a periodontist and immunologist,” says Dr. Sahingur. “I got to work with some of the best and brightest in our profession, who inspired me even more to be a dentist scholar.”

During her time in Buffalo, Dr. Sahingur also started a family. This was the beginning of a long period during which she and her husband, Emre, balanced a dual-career household, sometimes living in different locations, which ultimately led to a long daily commute from Washington, D.C., to her job as professor, researcher, and clinician at VCU School of Dentistry in Richmond, Va.

At VCU, Dr. Sahingur developed a research program that received more than \$5 million in grants from the National Institutes of Health and other sources. During this time, her achievements also included receiving the Women in Science, Dentistry and



ABOVE: Dr. Sahingur’s research has focused on understanding the mechanisms of how inflammation is initiated and regulated in the oral cavity and how it affects systemic inflammation.



Medicine Award and Dean's Award for Excellence in Research and Outstanding Faculty Mentor Award. She also was the inaugural recipient of the VCU C. Kenneth and Diane Wright Center for Clinical and Translational Research endowment fund grant.

Dr. Sahingur is a Diplomate of the American Board of Periodontology, an editorial board member of the *Journal of Dental Research* and *Molecular Oral Microbiology*, and has published numerous scholarly journal articles, and presented at conferences worldwide.

A FOCUS ON INFLAMMATION

With degrees in periodontology and immunology, Dr. Sahingur's research has focused on inflammation: understanding the mechanisms of how inflammation is initiated and regulated in the oral cavity and how it affects systemic inflammation — and thus overall health — throughout the body.

According to the Centers for Disease Control and Prevention, about half of Americans over the age of 30 have periodontitis, a more advanced form of periodontal disease.

"We want to define the key regulatory pathways and molecules during the initiation and resolution of inflammation in the oral cavity and find more effective therapeutic targets and markers," says Dr. Sahingur.

Through their pioneering studies, she and her team, who also have joined Penn Dental Medicine, revealed the involvement of nucleic acid sensing and ubiquitination in periodontal disease pathogenesis, as well as the link between the oral cavity, gut, and liver axis.

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"If not treated, periodontal disease provides a constant reservoir of inflammatory mediators and dysbiotic microbiota for sites distant from the oral cavity, which can impact many diseases," Dr. Sahingur says, including cardiovascular disease, Alzheimer's and arthritis. "It doesn't matter if the inflammation is in the knee or in the mouth," she adds. "If a patient has unresolved inflammation, it is constantly moving through the body."

ABOVE: Dr. Sahingur is meeting with students to help identify research interests and faculty labs where they can get hands-on research experience.

The positive news, as a recent study from her research team reported, is that if periodontal disease is treated, it improves other disease sequels, including that of the liver. "It's very promising to show that other disease outcomes can be improved by simple periodontal therapy such as cleaning," she says.

At Penn Dental Medicine, Dr. Sahingur is focused on supporting and building collaborative research within the School as well as across the University of Pennsylvania, including with medicine, engineering, and nursing. "It's very important as we move to a new era of precision medicine and personalized treatments to make sure dentistry is included, and expand opportunities for our students and their interests," she says. "Those interdisciplinary connections will be very important, we can't just think of ourselves as one entity."

As she works to meet her goals in this new role, Dr. Sahingur is gratified to be in a position to support and enhance opportunities for students in research and advanced degrees, as well as continue her research to improve the health and lives of patients.

"Being part of Penn Dental Medicine and the University is a true honor, and my research team is enjoying Penn as well," she adds. "I look forward to many pleasant memories in Philadelphia with my colleagues, family, and students." ■

— By Debbie Goldberg