Francesca Gori, PhD, Promoted to Associate Professor

Dr. Francesca Gori was recently promoted to associate professor of Oral Medicine, Infection and Immunity at HSDM.

Dr. Gori is also program director for the HSDM Forsyth Research Academy and director of predoctoral research at HSDM. Her work focuses on investigating the molecular mechanisms underlying skeletal cell functions in bone homeostasis and in diseases affecting the skeleton. Dr. Gori’s major focus is exploring the mechanisms by which Wnt signaling regulates skeletal stem cells, bone homeostasis as well as craniofacial and tooth development and bone regeneration. Congratulations to Dr. Gori.

Qian Cong, PhD, Receives Outstanding Postdoc Award

Dr. Qian Cong received the Outstanding Postdoc Award from the Office for Postdoctoral Fellows at HMS/HSDM.

Dr. Cong joined the Yang Lab in 2017 shortly after receiving her PhD in developmental biology from Shanghai Jiao Tong University. Since coming to HSDM, she has gained expertise in establishing human disease models in mice and has studied the underlying cellular and molecular mechanisms with complementary in vitro and in vivo approaches. Most recently, Dr. Cong has single-handedly accomplished a comprehensive study of heterotopic ossification and identified a novel shared cellular and molecular mechanism. This led to her being first author on a recent ground-breaking paper in Science Translational Medicine, “A Self-Amplifying Loop of YAP and SHH Drives Formation and Expansion of Heterotopic Ossification.” In this study, Dr. Cong and colleagues revealed the common molecular mechanism of the formation and expansion of acquired and hereditary heterotopic ossification, providing an important cellular and molecular basis for the prevention and treatment of heterotopic ossification. Congratulations to Dr. Cong.
HSDM PUBLICATIONS

DEVELOPMENTAL BIOLOGY


ORAL MEDICINE, INFECTION AND IMMUNITY


ORAL HEALTH POLICY AND EPIDEMIOLOGY


ORAL AND MAXILLOFACIAL SURGERY


RESEARCH RECOGNITION

Tom Van Dyke, DDS, PhD, Received the 2021 Distinguished Scientist Award at the American Academy of Periodontology Annual Meeting

Dr. Van Dyke is senior member of staff and vice president of clinical and translational research at the Forsyth Institute, and professor of Oral Medicine, Infection and Immunity at HSDM. His primary research focus has been to define the pathogenesis of periodontitis and other inflammatory diseases. The key question is the relationship between the oral microbiome that stimulates the inflammatory response and how the host response modifies the microbiome. His research is focused on the development of novel therapeutics for oral diseases by exploiting natural biological processes. He and his collaborators are internationally known for their work on a new class of anti-inflammatory mediators produced by our own bodies, termed lipoxins and resolvins. These molecules, which actively mediate resolution of inflammation, are significant because inflammation plays a major part in oral and systemic diseases, including gum disease, diabetes and heart disease. His research suggests that controlling inflammation in wound healing is essential for regenerating lost tissue and preventing scarring. The therapeutic use of these compounds could be a breakthrough, impacting everything from tooth loss to sepsis. Congratulations to Dr. Tom Van Dyke.

David Kim, DDS, DMSc, Received the 2021 Clinical Research Award at the American Academy of Periodontology Annual Meeting

Dr. David Kim, associate professor of Oral Medicine, Infection and Immunity; division head of periodontology; director of the advanced graduate program in periodontology; and director of continuing professional education, received the 2021 AAP Clinical Research Award. Dr. Kim and his colleagues published “The American Academy of Periodontology Best Evidence Consensus Statement on Modifying Periodontal Phenotype in Preparation for Orthodontic and Restorative Treatment.” This work was published in the Journal of Periodontology. Throughout his career, he has published 118 manuscripts and 25 book chapters. Dr. Kim’s clinical and research interests have been on the use of innovative concepts, technologies and biomaterials to enhance intraoral soft and hard tissue formation, especially by incorporating the tissue engineering concept to repair and regenerate soft and hard tissue volume for patients requiring dental implants to replace missing teeth. Congratulations to Dr. David Kim.
Shaima Bahammam, DDS, Received the Basic Science Research Forum Award at the American Academy of Periodontology 2021 Annual Meeting

Dr. Shaima Bahammam, fourth-year DMSc periodontology student, received the 2021 Basic Science Research Poster Award for her poster presentation, “Resolving Macrophage regulate Adiposity and Energy Expenditure on High Fat Diet.” This work was completed under the mentorship of Dr. Corneliu Sima, assistant professor of Oral Medicine, Infection and Immunity. Congratulations to Dr. Bahammam.

Dianne Luu, DMD, Received First Place in the Resident Research Poster Competition at the American College of Prosthodontics’ Regional Meeting

Dr. Dianne Luu, a third-year MMSc prosthodontics student, received first place for her poster presentation, “Comparison of Accuracy in Digital and Conventional Cross-Mounting.” This work was completed under the mentorship of Dr. Sang Lee, assistant professor of Restorative Dentistry and Biomaterials Sciences. Congratulations to Dr. Luu.

Olivia Nguyen, DDS, Received Third Place in the Resident Research Poster Competition at the American College of Prosthodontics’ Regional Meeting

Dr. Olivia Nguyen, a third-year MMSc prosthodontics student, received third place for her poster presentation, “A Surgical and Prosthetic Protocol for Optimizing Esthetic Harmony with Diverse Restoration.” This work was completed under the mentorship of Dr. Jason Lee, instructor in Restorative Dentistry and Biomaterials Sciences and Dr. Sang Lee, assistant professor of Restorative Dentistry and Biomaterials Sciences. Congratulations to Dr. Nguyen.
William Giannobile, DDS, DMSc, Receives Funding from Radius Inc. for an Interdisciplinary Translational Project Examining Abaloparatide

Dr. Giannobile, dean and professor of Oral Medicine, Infection and Immunity received funding from the Michigan, Pittsburgh, Wyss Regenerative Medicine Resource Center for, “Abaloparatide to Treat Alveolar Bone Loss for Dental Implant Reconstruction.” Dr. Giannobile’s research focuses on oral and periodontal regenerative medicine, tissue engineering and precision medicine. This particular project will examine Abaloparatide (abalo), a peptide-based therapeutic agent for the treatment of osteoporosis, is a parathyroid hormone receptor (PTHR1) agonist delivered through daily subcutaneous dosing. The overall hypothesis is that on-label use of systemic abalo therapy by adults with osteoporosis at high risk for fragility fractures will not only increase bone density systemically but will also enhance alveolar bone density and periodontal bone support. Systemic abalo therapy has the potential to increase bone formation and bone density throughout the mandible and maxilla, which may promote the healing of alveolar bone defects, increase primary dental implant fixation, and promote implant osseointegration.

Yingzi Yang, PhD and Jennifer Gibbs, DDS, PhD, MAS, Receive Seed Grant Funding from the Harvard Stem Cell Institute

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 of advanced graduate education in Endodontics at HSDM, have been collaborating on, “Sensory Nerve Regulation of Dentin Repair in Molars” for the past two years. Now with funding from the Harvard Stem Cell Institute, Drs. Yang and Gibbs propose to: 1) identify and characterize the dental pulp stem cells responsible for dentin repair in molar teeth; and, 2) to determine the effect of tooth injury on expression of Shh and other reparative signaling factor(s) in trigeminal neurons innervating the tooth and the role of neuronal Shh on stem cell populations in the dental pulp. They believe this project will have a strong impact on regenerative dentistry by identifying new signaling pathways to enhance protective dentin formation and inspire future treatments for biologically-based tooth repair.
Shenam Ticku, BDS, MPH, Receives Funding from the CareQuest Institute for Oral Health for a Collaborative Project with the University of Massachusetts Chan Medical School

Dr. Ticku is an instructor in Oral Health Policy and Epidemiology and conducts research on behalf of the Office of Global and Community Health; the Initiative to Integrate Oral Health and Medicine; and the Center for Integration of Primary Care and Oral Health (CIPCOH) at HSDM. She is the principal investigator for the study, “100 Million Mouths Campaign: Creating Primary Care Champions to Advance Oral Health Equity.” Dr. Ticku is collaborating with co-principal investigator, Hugh Silk, MD, MPH, professor in the Department of Family Medicine and Community Health at the UMass Chan Medical School; and lecturer of Oral Health Policy and Epidemiology at HSDM. Christine Riedy, PhD, MPH, Delta Dental of Massachusetts associate professor in Oral Health Policy and Epidemiology, will also serve as an investigator on this project. The 100 Million Mouths Campaign is an initiative launched by CIPCOH, to create and train fifty [one in each state] oral health champions over the next decade, to work with primary care health profession schools to integrate oral health into their curricula.

Fernando Guastaldi, DDS, MSc, PhD, Receives Funding from the AO Foundation

Dr. Guastaldi, instructor in Oral and Maxillofacial Surgery (OMFS), and director of the Skeletal Biology Research Center in the Department of Oral and Maxillofacial Surgery, received funding for, “Fractional Laser Combined with Self-Regenerating Cartilage to Repair the Temporomandibular Joint.” Dr. Guastaldi’s mentors include: Mark Randolph, MAS, director of the Plastic Surgery Research Laboratory; and, Robert Redmond, PhD, associate professor and chemist at the Wellman Center for Photomedicine. Dr. Guastaldi will collaborate with co-investigator, Joseph McCain, DMD, associate professor of OMFS; and, Henrique Matheus, DDS, MSc, and Henrique Hadad, DDS, MSc, research fellows in the Skeletal Biology Research Center in OMFS. After chronic low back pain, temporomandibular disorders (TMD’s) are the second most common musculoskeletal condition affecting 5-12% of the population, with an annual health cost burden estimated at $4 billion worldwide. Temporomandibular joint osteoarthritis (TMJOA) is a subtype of TMD characterized by slow and progressive degeneration of the mandibular condyle cartilage and bone, dramatically impacting function and quality of life. Current clinical management of TMJOA only treats the symptoms (i.e., pain and disfunction) and does not seek to restore joint integrity for long-term relief. Thus, the development of new therapies for condyle cartilage regeneration is a clear unmet clinical need to treat TMJOA. To overcome this significant clinical issue, Dr. Guastaldi proposes a novel approach that evaluates the use of fractional laser treatment in cartilage combined with their method for generating new cartilage matrix using dynamic self-regenerating cartilage to regenerate articulating cartilage defects in a rabbit TMJ model.
Sercan Akyalcin, DDS, MS, PhD, will be Joining HSDM to Lead the Orthodontics’ Program

Dr. Akyalcin will be a member of the faculty in the department of Developmental Biology and program director for advanced graduate education in orthodontics. His appointment will begin on March 1, 2022. With a keen interest in anthropology and human facial form, he followed a clinician-scientist trajectory to earn his dental and PhD degrees. He received his clinical training in Orthodontics at the University of Texas Health Science Center at Houston. In addition, he served as Bonham Magness Endowed Professor and graduate program director at the same institution until 2016. He has published more than 45 peer-reviewed papers, 11 book chapters, co-authored an orthodontic textbook, and has received many prestigious awards, including the 2019 Edward H. Angle Research Prize. Dr. Akyalcin was chosen for this important role for his vision and enthusiasm as a leader in the field of Orthodontics. He will bring innovation to the program, mentor advanced graduate students and faculty, and establish cutting-edge translational research.

Paul A. Levi, Jr., DMD, Received a Doctor Honoris Causa from the Universitat Internacional de Catalunya

Dr. Levi received 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 in Oral Medicine, Infection and Immunity, and has taught at HSDM since 1994. Dr. Levi has made it his life’s mission to teach predoctoral and postdoctoral students. He also lectures and gives workshops in many schools and for many dental organizations throughout the United States and in Europe and Asia. Congratulations to Dr. Levi.