



Dr. Ginny Ching Yun Hsu

2026 Biomedical Research Award

Oregon Health & Science University

Dr. Hsu is an Assistant Professor from Oregon Health & Science University. Dr. Hsu earned her dental degree from Shanghai Jiao Tong University and received Master of science in Oral biology from University of California Los Angeles. After Orthodontics training at New York University, Dr. Hsu pushed the envelope of her research field to stem cell in bone regeneration by going to Johns Hopkins University, School of Medicine, Department of Pathology for three years of postdoctoral training.

Dr. Hsu's research has had a strong emphasis in craniofacial biology, osteoprogenitor cells, and tissue engineering. Her research topic focusing in the tissue-specific properties of progenitor cells which lie within the perivascular mesenchyme, including microvascular pericytes. Dr. Hsu's research has received diverse research awards from the Northeastern Society of Orthodontists, American Association of Orthodontists Foundation, and the Maryland Stem Cell Research Fund and National Institute of Health. She is currently funded by five-year career development K08 award from the National Institute of Dental and Craniofacial Research.

Dr. Hsu's interests in craniofacial development and regeneration have led to the proposed research project, "Sex-Dimorphism of Perivascular Stromal Cells in Temporomandibular Joint Osteoarthritis Degeneration." This project will investigate sex-specific differences in the phenotype, function, and regenerative capacity of perivascular stromal cells within the temporomandibular joint under osteoarthritic conditions. It will elucidate how these differences contribute to disease progression and therapeutic response, with the goal of identifying targets for precision-based interventions. The preliminary data generated from BRA will support Dr. Hsu's future NIH R-series application.

This work will establish Dr. Hsu's scientific independence by defining a focused niche at the intersection of craniofacial biology, regeneration, and temporomandibular joint disease. It will generate critical preliminary data, strengthen her publication record, and enhance competitiveness for NIH R-series funding. In addition, it will foster new collaborations and advanced technical expertise, positioning Dr. Hsu as a leader in sex-specific mechanisms of musculoskeletal degeneration and regenerative therapies.