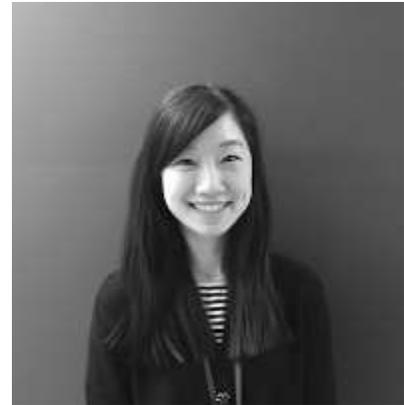


Research Aid Award

Dr. Ginny Ching-Yun Hsu, *New York University*

Dr. Hsu is a second year orthodontic resident from New York University Department of Orthodontics. Dr. Hsu was born and raised in Taiwan. She earned her dental degree from Shanghai Jiao Tong University and received a Master of Science in Oral Biology from University of California Los Angeles. In addition to her clinical training in orthodontics, Dr. Hsu has immersed herself in the scientific research of bone biology in Dr. Nicola Partridge's lab. Dr. Hsu is also the awardee of the 2016 NESO resident research program.



Low bone density in the jaw triggered by osteoporosis can lead to deleterious effects on tooth movement. With an increasing patient population of adult women having orthodontic treatment, it is important to seek treatment and take action for those suffering from osteoporosis. This research project determines the mechanism of parathyroid hormone (PTH), parathyroid hormone-related protein (PTHrP) and abaloparatide regulation of histone deacetylase 4 (HDAC4) in osteoblasts that will benefit the treatment of orthodontic patients.

Effective orthodontics education requires close collaboration with a multidisciplinary team of clinical and basic researchers. It is necessary and critical for a clinician scientist to develop an in-depth understanding of the relevance, potential contributions, and important limitations of various fields of clinical and basic science. The AAOF and this award will provide the necessary funding to complete the research project and facilitate Dr. Hsu's career development as an independent investigator.

Dr. Hsu's long term goal is to become an independent clinician scientist. The studies proposed in this application and her mentor, Dr. Nicola Partridge, will provide the opportunity and research training experience to become an independent scientist at a dental school in an academic institution. The goal of the Research Aid Award is to support the research training and career development during Dr. Hsu's orthodontic residency training in the laboratory of Professor Nicola C. Partridge with a research project that is timely and impactful. The mentorship of Dr. Partridge, the career development plan and the academic enhancement activities will prepare Dr. Hsu to be an independent, NIH-funded academic orthodontist who will contribute to the fields of craniofacial development and orthodontics.