

Biomedical Research Award

Dr. Andrew Jheon, *University of California, San Francisco*

Dr. Andrew Jheon received his PhD in Biochemistry and his DDS degree at the University of Toronto. He completed his postdoctoral training and orthodontic residency at the University of California San Francisco (UCSF) and has been an Assistant Professor in the Department of Orofacial Sciences since 2013. As tenure-track faculty, Dr. Jheon continues to develop his independent research portfolio, undertake didactic teaching, provide clinic supervision, and establish a faculty practice.



Dr. Jheon's research focus is in understanding the roles of molecules and cells in tooth development and movement using mouse models, to ultimately apply and translate his findings to advance and innovate clinical diagnosis and treatment. The project funded by the B.F. Dewel Memorial Biomedical Research Award proposes to profile the transcriptome of cells within the periodontal ligament (PDL) during orthodontic tooth movement in mice. This proposal is distinct from prior studies because innovative techniques such as laser microdissection capture and RNAseq will be utilized to generate and compare/contrast global gene expression changes in PDL regions of low and high tension.

Orthodontic education will benefit from this award because despite the popularity and history of orthodontic treatment we have yet to fully understand the cellular and molecular basis of orthodontic tooth movement, especially in determining the role of PDL cells in directing bone formation and remodeling.

The AAO Foundation is important because it provides resources to perform experiments and data analysis that will advance the orthodontic specialty. Furthermore, the AAOF highlights the importance of basic research by their support as we continue to progress towards evidence-based orthodontics.

The recognition by the AAOF will benefit Dr. Jheon and his research by garnering more attention to the importance of basic research in innovating and advancing any field of specialization including orthodontics.