

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. Dr. Jheon completed his postdoctoral training and orthodontic residency at the University of California San Francisco (UCSF). He has been an Assistant Professor in the Division of Orthodontics at UCSF since 2018. As tenure-track faculty, Dr. Jheon continues to develop his independent research portfolio, undertake didactic teaching, provide clinic supervision, and treat patients in his faculty practice.



Dr. Jheon's research focus for the Biomedical Research Award is to characterize dental and craniofacial anomalies observed in Nodder mice. Nodder mice harbor a mutation in *Jag1*, a component of the Notch signaling pathway, which result in mice with characteristics associated with human Alagille syndrome. Alagille syndrome largely affects the liver and heart, as well as other body parts. Despite a handful of reports noting dental and craniofacial changes in subjects with Alagille syndrome, there is no consensus on such changes, comprehensive phenotypic analysis has yet to be performed, and mechanistic understanding of dental and craniofacial changes are unclear. We will characterize dental and craniofacial changes in a mouse model for Alagille syndrome.

Orthodontic education will benefit from this award because dental and craniofacial changes in subjects presenting with Alagille syndrome are unclear although prior reports clearly indicate that dental and craniofacial anomalies exist.

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.