2024 RAA
Dr. Yueling Zhang, University of Connecticut

Project: A novel approach to integrate 3D facial and intraoral scans and its application.

1) a short biography: I grew up in China. I graduated dental school and completed my first orthodontic residency program at West China School of Stomatology in China. Later, I attended the advanced standing program for international dentists at University of Minnesota School of Dentistry to receive my DDS. I am currently a second-year orthodontic resident at the University of Connecticut. My research interest is in integration of 3D dental models and 3D facial scans to study soft tissue response during orthodontic treatment. My hobbies include reading and travelling which allows me to explore new ideas.

2) a brief description of the project: This study aims to study the changes of lips upon retraction of maxillary anterior teeth during orthodontic treatment. It seeks to fill a gap in understanding by investigating the relationship between dental movements and facial soft tissue changes during orthodontic retraction. The findings may help clinicians make better prediction of facial changes before treatment and make progress decisions during the treatment.

3) a statement of how orthodontic education will benefit from your award: My AAOF Research Aid Award will enhance orthodontic education by improving orthodontic residents' understanding of three-dimensional lip changes during orthodontic retraction and helping them establish specific esthetic treatment objectives for their patients. Through this award, valuable data on dental movement and corresponding facial soft tissue changes during orthodontic retraction will be collected; a basic research protocol for integrating dental scans with facial scans will be established, enabling future residents to do further research on soft tissue response to different types of orthodontic treatment. Ultimately, this support will contribute to a more comprehensive understanding and prediction of facial soft tissue changes from orthodontic treatment, ensuring that future orthodontists are proficient in achieving optimal esthetic outcomes for their patients.

4) why the Foundation is important to your project: The American Association of Orthodontics Foundation (AAOF) is vital to our project for several reasons. The AAOF provides crucial financial support which allows us to cover expenses related to data collection, analysis, and dissemination of findings. Additionally, the AAOF serves as a

reputable organization within the orthodontic community, lending credibility to our research endeavor. By receiving support from the AAOF, our project gains recognition and validation within the field of orthodontics, which can facilitate collaboration with other researchers, practitioners, and stakeholders. Furthermore, the AAOF provides access to a network of orthodontic professionals, educators, and researchers who can offer expertise, guidance, and mentorship throughout the duration of our project. This access to a supportive community enhances the quality and impact of our research efforts.

5) how Foundation funding is expected to or has benefitted your career: AAOF funding can be instrumental in advancing my career in several ways. Firstly, it has provided financial support for my research project, allowing me to pursue investigations into important topics such as soft tissue response to orthodontic tooth movement. Secondly, receiving funding from prestigious foundations like the AAOF can enhance my credibility and reputation within the orthodontic community. It demonstrates that my work is recognized and supported, which can open doors to collaboration opportunities, speaking engagements, and leadership roles within professional associations. I feel motivated to make meaningful contributions to the field of orthodontics and advance my career aspirations.