

## Research Aid Award

### Dr. Emelia Karkazis, *University of Illinois Chicago*

Dr. Emelia Karkazis attended Marquette University as a seven-year dental scholar. She earned her B.S. in Biomedical Sciences in 2018, graduating Summa Cum Laude, and her D.D.S. in 2021, graduating Magna Cum Laude. Dr. Karkazis is currently a second-year orthodontic resident at the University of Illinois Chicago.



Dr. Karkazis has been engaged in scholarly work since dental school. She presented her findings on 3D imaging at the International Association for Dental Research in Vancouver, Canada in 2019. She then published her findings in the book titled *Applications of Biomedical Engineering in Dentistry* in 2020. She studied the efficacy of Invisalign Attachments and was published in the *American Journal of Orthodontics and Dentofacial Orthopedics* in 2021. Upon graduation from dental school, Dr. Karkazis received the Pierre Fauchard Academy Student Merit Certificate Award and the Quintessence Publishing Company Research Award. She was subsequently inducted into the Omicron Kappa Upsilon National Dental Honor Society. As a first-year orthodontic resident, Dr. Karkazis received the Allan G. Brodie Scholars Program Award at the University of Illinois Chicago.

Dr. Karkazis is committed to the research and educational missions of the American Association of Orthodontists Foundation. In 2022, Dr. Karkazis was awarded an AAOF Research Aid Award in support of her proposed investigation regarding bone characterization in a novel dicer deficient mouse model specific to osteocytes. Under the guidance of her mentor, Dr. Phimon Atsawasuan, Dr. Karkazis will investigate an osteocyte-specific promoter on bone remodeling. The results of this study may allow clinicians to broaden their scope of diagnosis and treatment to accelerate or decelerate tooth movement at the desired levels and locations in the alveolar bone.

With the generous funding provided by the American Association of Orthodontists Foundation, Dr. Karkazis will obtain the instrumentation and laboratory supplies necessary to complete her research. Dr. Karkazis will use micro-CT imaging and histological analysis in these investigations. Dr. Karkazis would like to express her deepest gratitude to the members of the AAOF and PARC committee for their support. The funding from this organization is what will allow researchers, academics, and clinicians to advance the specialty of orthodontics.