

Orthodontic Faculty Development Fellowship Award

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Biography

I received my dental degree (DDS) from the National and Kapodistrian University of Athens, School of Dentistry, Athens, Greece in 2012; and completed a 3-year specialty training program in Orthodontics and Master of Science degree (MS) at the Eastman Institute for Oral Health (EIOH), University of Rochester, NY in 2017. I am a diplomate of the American Board of Orthodontics and have received further certifications in the field of Orthodontics from the Charles H. Tweed International Foundation. I currently serve as an Associate Professor and Assistant Program Director at the Department of Orthodontics at the EIOH, where I was recruited as a full-time faculty in 2017. I maintain a faculty practice limited to Orthodontics, I supervise residents in the Orthodontics Clinic, teach several courses, and serve as a research mentor for postgraduate residents and MS students. My research focuses include the influence of local and systemic factors on orthodontic treatment-related parameters, and various contemporary orthodontic treatment modalities such as mini-screw implants and clear aligners. I have contributed several publications in peer-reviewed journals including scientific articles and book chapters. I was awarded the 2020 Subtelny, Baker, Eastman Teaching Fellowship Award by the American Association of Orthodontists Foundation, which helped me conduct clinical research on clear aligner therapy. I am enrolled as a PhD student at the National and Kapodistrian University of Athens, Medical School in collaboration with the UR; and I am conducting a prospective clinical study assessing the influence of increased body mass index on orthodontic treatment-related parameters. I am honored to be elected as the Secretary for the Section on Orthodontics of the American Dental Education Association.



Project Synopsis

The present research project is focused on assessing the influence of increased body mass index (BMI) on orthodontic treatment (OT)-related parameters in adolescents. Obesity is a global health problem and the prevalence of obesity among adolescents is rising. An increased BMI is associated with the occurrence of oral inflammatory conditions; and has been linked with an increased production and expression of destructive inflammatory cytokines such as interleukin (IL) 1-beta (1 β), tumor necrosis factor-alpha (TNF- α) and IL-6 in salivary samples. An imbalance in adipokines or weight regulatory hormones (leptin and resistin) has also been reported in patients with increased BMI. An increased BMI has also been associated with increased oral yeasts carriage (predominantly *Candida* species) and an altered inflammatory response to orthodontically-induced tooth movement. To date, there are no studies that have evaluated the synergistic effect of increased BMI and fixed OT on whole salivary oral yeast carriage in adolescents. In a systematic

review, Michelogiannakis et al. reported that the association between an increased BMI, gingival health and rate of orthodontic tooth movement remains debatable. The aim of the present prospective cohort clinical study is to assess the influence of increased BMI on gingival inflammation, tooth movement rate, IL-1 β , TNF- α , IL-6, leptin and resistin levels and *Candida* carriage in stimulated whole saliva (SWS) of adolescents undergoing fixed OT for a 6-month observation period.

Project significance for the orthodontic education

The findings of the present study will help identify whether an increased BMI is a risk factor for oral health-related complications in adolescents undergoing fixed OT; which will in turn highlight potential need of patient counselling prior to the initiation of OT.

Importance of AAOF support

Support from the American Association of Orthodontists Foundation (AAOF) will be instrumental towards conducting this research, and will help me pursue my PhD degree, faculty training and participation in educational workshops. In addition, the award will help me to further develop as an Orthodontic Educator, scholar and independent researcher.

Significance of previous AAOF funding

I was awarded the 2020 Subtelny, Baker, Eastman Teaching Fellowship Award by the AAOF which enabled me to conduct and publish two clinical studies regarding the influence of non-extraction clear aligner therapy on airway dimensions and alveolar bone in adults. Funding from the AAOF was crucial towards the conduction of these projects and enabled me to pursue various educational activities that honed my academic skills. Current funding from the AAOF will help me continue in this trajectory.