

Orthodontic Faculty Development Fellowship Award

Dr. Jennifer Caplin, *University of Illinois at Chicago*

My name is Jennifer Caplin and I am a full time clinical assistant professor at the University of Illinois at Chicago, College of Dentistry, Department of Orthodontics. I received my BS in Biology from the Massachusetts Institute of Technology in 2007 and my DMD from the University of Pennsylvania, School of Dental Medicine in 2011. After graduation, I spent 9 months in Shanghai, China, providing volunteer dental care and oral hygiene education to underserved children. I then returned to the US, where I received my MS in Oral Sciences from the University of Illinois at Chicago in 2014 and my certificate in orthodontics from the University of Illinois at Chicago, College of Dentistry, Department of Orthodontics in 2015. I worked as an orthodontist in Bethlehem, Pennsylvania for one year before returning to the University of Illinois at Chicago as a full time faculty member in the Department of Orthodontics.



My first project, *The Effect of Implementation of the HLD Index for Medicaid Patients on Access to Orthodontic Care in Illinois*, will study the impact the adoption of the handicapping labiolingual discrepancy (HLD) index has had on Medicaid approval rates for orthodontic coverage in the state of Illinois. The project will evaluate the change in approval and denial rates in 2016, under the old checklist system, compared to 2017, when the HLD index was introduced. 100 consecutive approved and 100 consecutive denied subjects from both 2016 and 2017 will be selected for further analysis to highlight the types of malocclusions that are most often covered and/or denied under both systems. This project will help the orthodontic community advocate for better systems to evaluate Medicaid coverage in order to provide care for the greatest number of patients. This project has provided valuable research experience for three dental students who wish to become orthodontists.

My second project, *Linking Malocclusion and Body Mass Via Genetic Variants within the Hippo Signaling Pathway*, will build on preliminary research conducted by my co-PI, Dr. Steven Miller, and his team at the University of Iowa. This preliminary research shows evidence (unpublished, personal communication), of a link between several genes on the hippo signaling pathway and craniofacial morphology. The hippo signaling pathway is also directly responsible for controlling several aspects of body mass index. Therefore, this project will also attempt to determine if there is a link between craniofacial morphology and body mass index. We will look at both diet and genetic variability along the hippo signaling pathway to attempt to elucidate this link. This project will result in two master's thesis projects for orthodontic residents. The

foundation is vital to this project, as the project could not be performed without the valuable funding provided by this grant.

Receiving this grant will advance my career by allowing me to conduct groundbreaking research, which will hopefully lead to the publication of several articles in peer reviewed journals. It also allows me to be a mentor and committee chair for the residents who will use the funding for their master's projects.