

# Orthodontic Faculty Development Fellowship Award

**Dr. Helder Baldi Jacob, *The University of Texas, Houston***

My current academic title is Assistant Professor at the Department of Orthodontics, at The University of Texas School of Dentistry at Houston. I am a clinician-researcher with expertise on craniofacial growth, biomechanics, maxillary expansion, and clinical studies of orthodontics, with a long record of publications in the orthodontic literature.



I will oversee all aspects of the project entitled “Differences in Dental Maturation in Adolescents among American-Mestizos, Mexican-Mestizos and Caucasians,” including research design, and collection, analysis and interpretation of data, as well as the preparation and submission of associated publications and applications for additional funding. Some of the collaborators are in Dallas (USA), and Monterey and Mexico City (Mexico). AAOF fund will support the project to pay for the personnel enrolled in this project, as well office supplies, airfare and hotel for data collection (national and international), and partial expenses for the PI to attend scientific meetings disseminating research findings (unique opportunity to show the work and network with experts in the field to make collaborative ties).

This retrospective study will collect data from panoramic radiographs taken in the United States and Mexico. Dental maturation of 205 Mexican-Mestizos and 205 American-Mestizos adolescents between 12 and 15 years of age will be evaluated. The Demirjian dental assessment system will be used to evaluate each subject's dental age to determine its maturity score. The basic problem is that the clinical community does not have good and reliable reference dental maturity standards for Mexican-Mestizos and American-Mestizos. The Caucasian standards typically used are not appropriate for American-Mestizos and Mexican-Mestizos, and height and weight has been the only references standards developed for these populations to-date. It is very important to develop Mexican-American standards. This study will develop dental maturation standards for the Mexican-American population, comparing them to Mexican-Mestizos and Caucasians. The collaboration established between the team members, and the future potential collaborators identified during the project will be essential for future funding from the National Institute for Dental and Craniofacial Research (NIDCR). The collaborative effort is expected to produce a number of publications within 1-3 years.

The orthodontic community will be benefited from this award because there have been no studies reporting dental maturation for Mexican-American or Mexican-Mestizos. It is also necessary to clarify the discrepancies between these populations and Caucasians.

The AAOF has become an essential funding source for projects that are relevant to our specialty, allowing young faculty to move forward in their career. This award will prepare me to generate preliminary data and publications creating possibilities for a NIDCR fund application. In addition, research is essential for evidence-based orthodontic practice and the AAOF has been helping young faculty to develop their careers in the field of orthodontics. Having 30% of my time dedicated to research is very important to have support from my Institution and association (AAOF) to keep the possibility to develop some research projects that could be relevant for the orthodontic community. Publishing is important to bring new information, reconcile inconsistencies, or validate new material to the specialty of orthodontics.