AAO Foundation Award Final Report

Principal Investigator	Dr. Maria Tassopoulou-Fishell
Co-Investigator	Dr. Alex Vieira
Secondary Investigators	N/A
Award Type	Orthodontic Faculty Development Fellowship Award-AAO Restricted Gift
Project Title	Candidate Gene Studies of Mandibular Prognathism Using DNA Samples Acquired from Patients' Saliva
Project Year	2008
Institution	University of Pittsburgh
Summary/Abstract (250 word maximum)	**Introduction**: In orthodontics one of the most challenging aspects in treating patients is the prediction of mandibular growth especially for patients that show more pronounced characteristics of mandibular development. It is well documented that there is a strong link of mandibular prognathism and genetics. Recent studies suggested a number of loci as linked to mandibular prognathism. The goal of this study was to test if any of these chromosomal regions were associated with mandibular prognathism in a group of subjects recruited at the University of Pittsburgh School of Dental Medicine. **Methods:** The inclusion criteria for the Class III patient selection included cephalometric values indicative of Class III such as negative ANB, negative Witts appraisal (> -1.0 mm for men), positive A-B plane etc. Additional Class III criteria include negative OJ and visually prognathic profile as determined by the patient's clinical evaluation. The subjects were 44 prognathic/skeletal Class III patients and 36 patients of orthognathic facial type serving as the control group. Single nucleotide polymorphism markers were selected in the chromosomal regions 1p22.1, 3q26.2, 5p13-p12, 6q23, 11q22, 12q13.13, 12q23, and 19p13. Genotypes were generated using TaqMan chemistry. Chi-square, Fisher's exact tests were used to detect overrepresentation of alleles. **Results:** No association was found between the candidate regions studied and mandibular prognathism. **Conclusions:** Although no associations between mandibular prognathism and genetic variation in candidate regions were detected, this project shows that larger scale projects including the collection of careful phenotypical clinical information and biological samples is feasible in the orthodontic setting of the University of Pittsburgh School of Dental Medicine.
Were the original, specific aims of the proposal realized?	This study was recently concluded and therefore the results have not been published. Publishing this study is definitely in our future intentions. A manuscript will be prepared for submission to the American Journal of Orthodontics and Dentofacial Orthopedics.

Were the results published? If not, are there plans to publish? If not, why not?	
Have the results of this proposal been presented? If so, when and where? If not, are there plans to do so? If not, why not?	As I mentioned before, this is a recently concluded study and we have not yet published or presented anything related to our topic. We are planning to do so in the future in the AADR and AAO meetings.