

AAO Foundation Award Final Report

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Secondary Investigators	Dr. James Hartsfield, Dr. Jon Seidman
Award Type	Biomedical Research
Project Title	Genetic Determination of Facial Morphology: Identification of Genes for Mandibular Prognathism by Positional Cloning
Project Year	1999
Institution	University of Southern California, Harvard Medical School, Indiana University, Pusan University
Summary/Abstract	<p>Class III malocclusion due to mandibular prognathism is clearly an inherited trait, however the mode of inheritance is unclear. It has been reported to be an autosomal dominant trait, a dominant trait with incomplete penetrance, and a simple recessive trait. The genetics of mandibular prognathism is important for the clinical treatment of Class III patients as it lays the foundation for understanding the different types of Class III patients, growth and development and response to mechanotherapy. Therefore the goal of this ongoing research is to identify the gene(s) for mandibular prognathism by positional cloning. We have collected data from several families with a history of mandibular prognathism and are in the process of performing linkage analysis for association with chromosomal locations. Our preliminary data show that mandibular prognathism is an autosomal dominant trait with approximately 70% penetrance.</p>