

## AAO Foundation Final Report 2012- 2013

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<b>Co-Investigator</b> Barry H. Grayson, DDS and Joseph G. McCarthy, MD
Secondary Investigators
<b>Award Type</b> AAOF Faculty Development Award
<b>Project Title</b> Longitudinal growth analysis of mandibular asymmetry in unoperated patients with unilateral craniofacial microsomia (UCFM)
<b>Project Year</b> July 2012 to June 2013
<b>Institution</b> Department of Plastic Surgery New York University Langone Medical Center New York, NY 10016
<b>Summary/Abstract</b> This is a serial retrospective longitudinal growth study of 30 untreated patients (21 males and 9 females) with unilateral craniofacial microsomia (age range from 5 years to 14 years). The inclusion criteria were that patients had to have a lateral and posteroanterior (PA) cephalograms at 2 time points separated by at least a 2 year interval without any surgical intervention. The mean age of patients was 8.5 years and the mean follow-up records were 3.7 years. There were 13 patients in group I with a Pruzansky Type I mandible and 17 patients in group II with a Pruzansky Type II mandible. Fourteen patients had the right side of the mandible affected and sixteen patients had the left side of the mandible affected. The unaffected side of the mandible served as a control. Eighteen parameters were examined at each of the two time intervals.

In patients with Pruzansky Type I mandible the affected ramus grew on average 1.41 mm per year; during the same period the unaffected ramus grew 1.66 mm per year. In patients with Pruzansky Type II mandible the affected ramus grew on average 0.84 mm per year; during the same period unaffected ramus grew 1.79 per year. When the growth rate of the ramus height on the affected side was compared to unaffected side, there was no statistical significant difference in Pruzansky Type I mandible ( $p > 0.05$ ), and there was statistical significant difference in Pruzansky Type II mandible ( $p < 0.05$ ).

**Were the original, specific aims of the proposal realized?**

Yes

**Were the results published? If not, are there plans to publish? If not, why not?**

Results are not yet published. This paper will be published in the Journal of Reconstructive Plastic Surgery

**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?**

The results of this study will be presented at the International craniofacial Surgeon Meeting in Jackson Hole, Wyoming in September 2013.

**To what extent have you used, or how do you intend to use, AAOF funding to further your career?**

I have used the AOOFF funding for my research and publication in the area of Craniofacial Orthodontics. Publication are important criteria for my promotion as Tenure Track Associate Professor in Plastic Surgery (Craniofacial Orthodontics). I am thankful to AAOF for their generous support.