



401 N. Lindbergh Blvd.
St. Louis, MO 63141
Tel.: 314.993.1700, #546
Toll Free: 800.424.2841, #546
Fax: 800.708.1364

Send via email to: jbode@aaortho.org and cyoung@aaortho.org

AAO Foundation Final Report Form (a/o 5/30/2022)

Please prepare a report that addresses the following:

Type of Award: Biomedical Research Award

Name(s) of Principal Investigator(s): Shankar Rengasamy Venugopalan and Brad Amendt

Institution: University of Iowa College of Dentistry

Title of Project: Analyses of microRNA Target-site Polymorphisms in Craniofacial Microsomia

Period of AAOF Support : 07-01-2020 to 06-30-2021

Amount of Funding: \$30,000

Summary/Abstract

Detailed results and inferences:

1. If the work has been published please attach a pdf of manuscript OR
2. Describe in detail the results of your study. The intent is to share the knowledge you have generated with the AAOF and orthodontic community specifically and other who may benefit from your study. Table, Figures, Statistical Analysis, and interpretation of results should be included.
 - a. Please see attached manuscript (in preparation) for details.

Respond to the following questions:

1. Were the original, specific aims of the proposal realized?

The goals of this proposal realized are the following:

- There is differential expression of critical genes and transcripts between right and left murine maxillo-mandibular complexes at E14.5.
- There is differential expression of genes and transcripts with significant constraint scores and GO terms involving several important developmental events during embryogenesis.
- Many of these genes and transcripts have known associations with craniofacial phenotypes in mice and humans, including association with cleft lip \pm palate and craniofacial microsomia.
- These findings set a baseline for differential expression between maxillo-mandibular complexes at E14.5. Future studies are needed to confirm these findings.

2. Were the results published?

- a. If so, cite reference/s for publication/s including titles, dates, author or co-authors, journal, issue and page numbers – Please see attached manuscript draft.
- b. Was AAOF support acknowledged? – AAOF support will be acknowledged
- c. If not, are there plans to publish? If not, why not? – An abstract has been presented in the Iowa Section of the AADOCR 2022 meeting. We have the first draft of the manuscript written and we are planning to publish the data generated with the support of this grant.

3. Have the results of this proposal been presented?

- a. If so, list titles, author or co-authors of these presentation/s, year and locations
J Crawford, S Eliason, S Wuebker, E Van Otterloo, H Cao, B Amendt, S Rengasamy Venugopalan. Differential Gene Expression in Murine Right and Left Maxillo-Mandibular Complex. Iowa Section of the American Association for Dental, Oral, and Craniofacial Research, 2022 69th Annual Meeting.
- b. Was AAOF support acknowledged? - Yes
- c. If not, are there plans to do so? If not, why not?

4. To what extent have you used, or how do you intend to use, AAOF funding to further your career? AAOF funding has tremendously helped in generating preliminary data and I am planning to utilize AAOF funding in the future to support my translational research to advance the specialty of orthodontics.

Accounting for Project; (i.e.), any leftover funds, etc. – There is a leftover amount of \$2172.02 and will be returned to AAOF.