

Cichlid fishes as a model to understand normal and clinical craniofacial variation

Kara E. Powder, R. Craig Albertson



PII: S0012-1606(15)30369-9  
DOI: <http://dx.doi.org/10.1016/j.ydbio.2015.12.018>  
Reference: YDBIO6961

To appear in: *Developmental Biology*

Received date: 1 September 2015  
Revised date: 14 December 2015  
Accepted date: 21 December 2015

Cite this article as: Kara E. Powder and R. Craig Albertson, Cichlid fishes as a model to understand normal and clinical craniofacial variation, *Developmental Biology*, <http://dx.doi.org/10.1016/j.ydbio.2015.12.018>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting galley proof before it is published in its final citable form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

**Cichlid fishes as a model to understand normal and clinical craniofacial variation.**

Kara E. Powder<sup>1\*</sup> and R. Craig Albertson<sup>1\*</sup>

<sup>1</sup> Department of Biology, University of Massachusetts, Amherst, MA 01003, USA.

*\*Corresponding Authors:*

Department of Biology

University of Massachusetts Amherst

221 Morrill Science Center South

611 North Pleasant Street

Amherst, MA 01003

Tel: 413-545-2865

Fax: 413-545-3243

Email K.E.P.: [kepowder@bio.umass.edu](mailto:kepowder@bio.umass.edu)

Email R.C.A.: [albertson@bio.umass.edu](mailto:albertson@bio.umass.edu)

Keywords: craniofacial, cichlids, complex trait, morphological variation, evolutionary mutant

**Abstract**

We have made great strides towards understanding the etiology of craniofacial disorders, especially for ‘simple’ Mendelian traits. However, the facial skeleton is a complex trait, and the full spectrum of genetic, developmental, and environmental

Download English Version:

<https://daneshyari.com/en/article/10931122>

Download Persian Version:

<https://daneshyari.com/article/10931122>

[Daneshyari.com](https://daneshyari.com)