

## The microRNA *miR-196* acts upstream of *Hoxb8* and *Shh* in limb development

Eran Hornstein<sup>1</sup>, Jennifer H. Mansfield<sup>1</sup>, Soraya Yekta<sup>2</sup>, Jimmy Kuang-Hsien Hu<sup>1</sup>, Brian D. Harfe<sup>3</sup>, Michael T. McManus<sup>4</sup>, Scott Baskerville<sup>2</sup>, David P. Bartel<sup>2</sup> & Clifford J. Tabin<sup>1</sup>

1. Department of Genetics, Harvard Medical School, 77 Avenue Louis Pasteur, Boston, Massachusetts 02115, USA
2. Whitehead Institute for Biomedical Research, Massachusetts Institute of Technology, 9 Cambridge Center, Cambridge, Massachusetts 02142, USA
3. Department of Molecular Genetics and Microbiology, University of Florida College of Medicine, Gainesville, Florida 32610, USA
4. Department of Microbiology and Immunology, Diabetes Center, University of California at San Francisco, San Francisco, California 94143, USA

Correspondence to: Clifford J. Tabin<sup>1</sup> Correspondence and requests for materials should be addressed to C.J.T. (Email: [tabin@genetics.med.harvard.edu](mailto:tabin@genetics.med.harvard.edu)).

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### Abstract

**MicroRNAs (miRNAs) are an abundant class of gene regulatory molecules (reviewed in refs [1](#), [2](#)). Although computational work indicates that miRNAs repress more than a third of human genes<sup>3</sup>, their roles in vertebrate development are only now beginning to be determined. Here we show that *miR-196* acts upstream of *Hoxb8* and Sonic hedgehog (*Shh*) *in vivo* in the context of limb development, thereby identifying a previously observed but uncharacterized inhibitory activity that operates specifically in the hindlimb. Our data indicate that *miR-196* functions in a fail-safe mechanism to assure the fidelity of expression domains that are primarily regulated at the transcriptional level, supporting the idea that many vertebrate miRNAs may function as a secondary level of gene regulation.**

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