

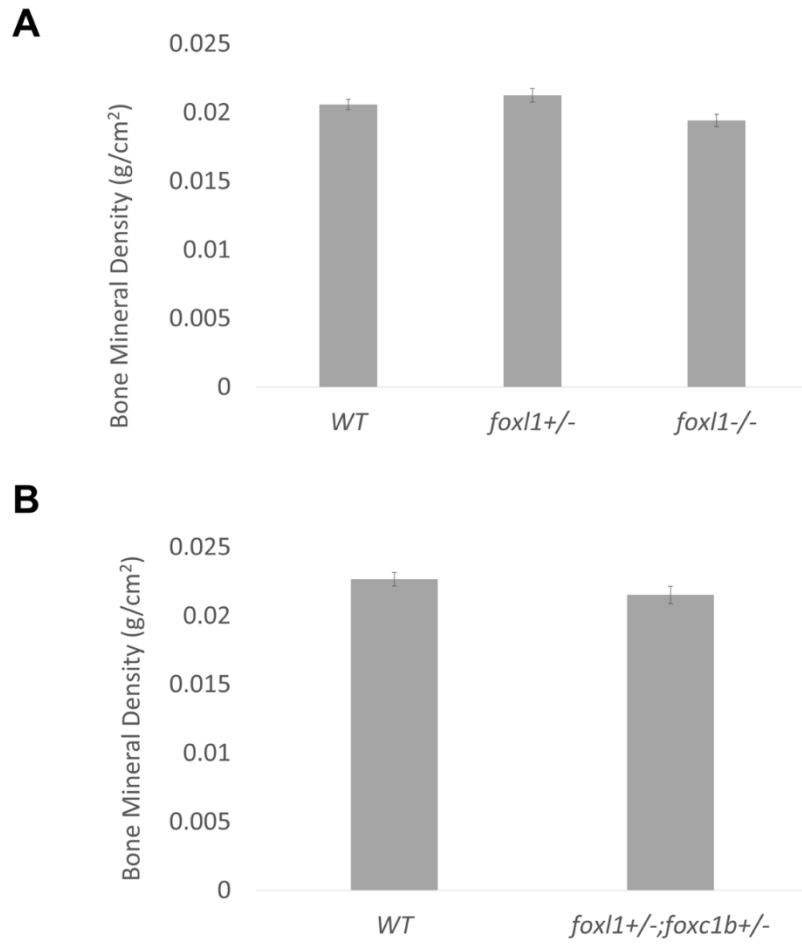
## Supplementary Materials

**Table S1.** Primer and sgRNA sequences used in this study.

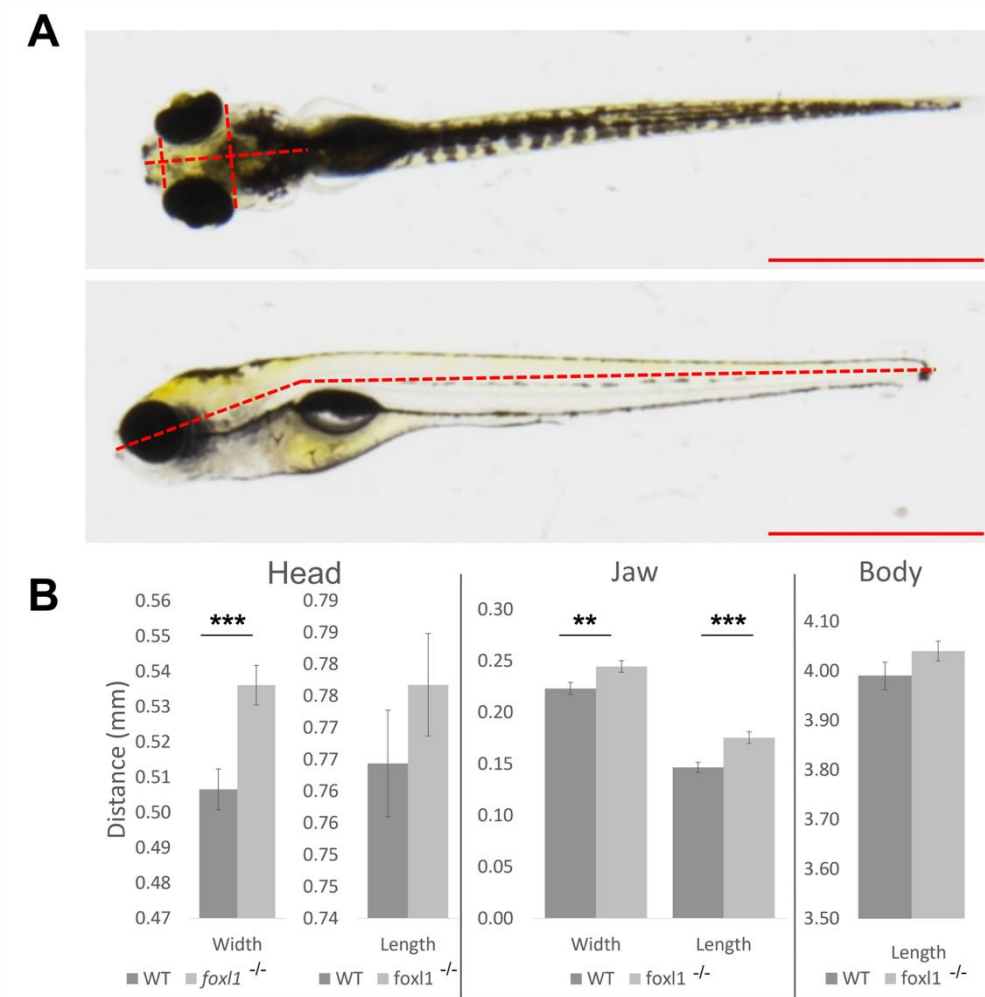
Sequence (5'-3')	Purpose
GTTTTGGAGAGCAGTCATGCAG	<i>foxc1a</i> probe, forward primer
GCGTTGGAGGTAGTCGAGATAG*	<i>foxc1a</i> probe, reverse primer
TGAAGCAAAGGGAGGAAGAGAC	<i>foxc1b</i> probe, forward primer
ATAGAGGAGGCGTTTGTGTGT*	<i>foxc1b</i> probe, reverse primer
GTCTCTCCGCTCAAGCAAAATC	<i>foxl1</i> probe, forward primer
CGTAGGAGAGGACAGGAACAAC*	<i>foxl1</i> probe, reverse primer
AGGCATCATCCCCGCGCT	<i>foxl1</i> gRNA sequence 1
AGCGCGGGGATGATGCCT	<i>foxl1</i> gRNA sequence 2

\*A T7 promoter sequence (TAATACGACTCACTATAGGG) was added to the 5' end of the reverse primer to generate antisense probes.





**Figure S2. Loss of *foxl1* does not affect bone density in adult zebrafish.** Analysis of *foxl1* mutants at 6 months of age does not reveal any bone mineral density defects in heterozygous or homozygous fish (A). At one year of age, fish heterozygous for both *foxl1* and *foxc1b* mutations does not have any defects in bone mineral density (B).



**Figure S3. Loss of *foxl1* results in increased head and jaw width, and jaw length, but does not affect total body length at 6 dpf.** (A) WT embryo indicating the axes measured (red, dotted lines). Jaw width was measured at the widest point of the palatoquadrate, with length being measured from the most distal end of the mouth to the end of the palatoquadrate bone. Head width was measured at its widest point immediately posterior of the eyes, while length was determined from the most distal end of the mouth to the most anterior portion of the Weberian apparatus. Body length was determined by measuring along the lateral line and middle of head. (B) *foxl1* ( $n = 28$ ) mutants exhibit both wider heads ( $p = 0.00089$ ) and jaws ( $p = 0.01254$ ), along with longer jaws ( $p = 0.00063$ ) in comparison to WT siblings ( $n = 24$ ). No difference was observed in head or total body length. Significance was determined using a two-tailed T-test. Scale bars are 1 mm.