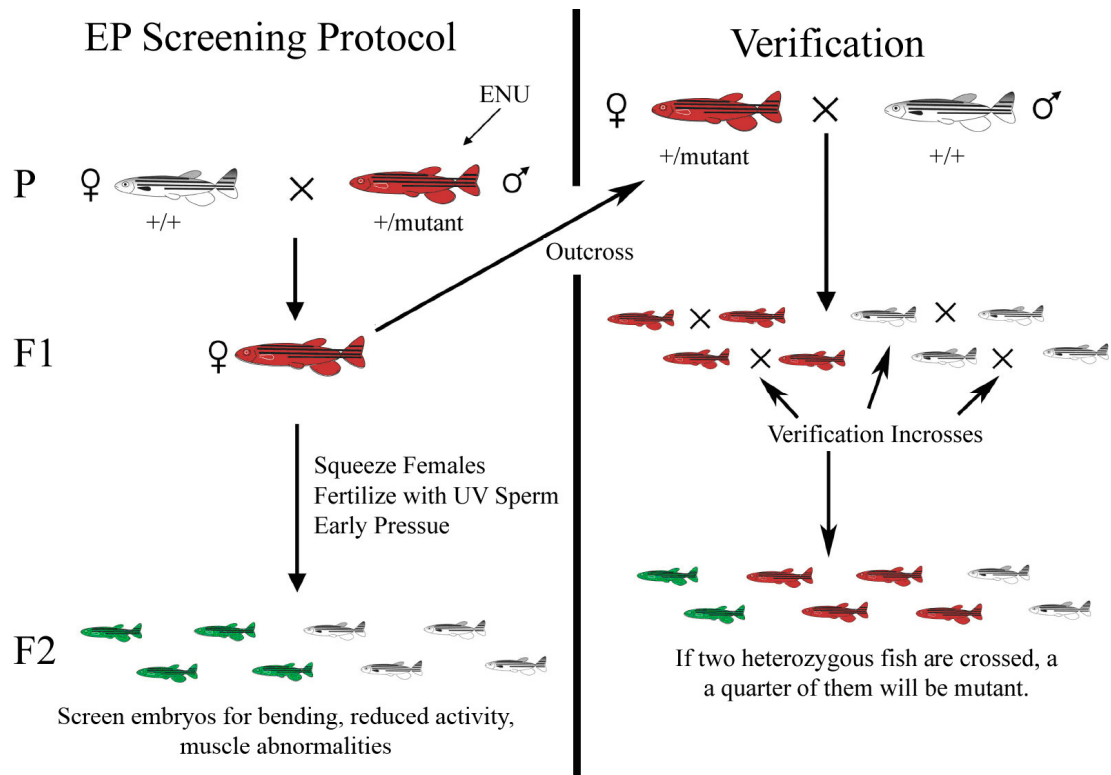


**SUPPLEMENTAL INFORMATION:**



**Supplemental figure 1.** EP Screening protocols are shown on the left and the subsequent genetic verification protocols are outlined on the right. Starting from the parents (designated “P”), the ENU mutagenized males were outcrossed with wildtype females to produce F1 offspring heterozygous for 25-50 potential phenotype causing mutations. The female F1’s were squeezed and the offspring made gynogenetically diploid using the early pressure technique. The F2 offspring were scored for muscle defects. If any number of F2 offspring show muscle defects, the F1 female was outcrossed with a wildtype male and their progeny incrossed to genetically confirm the mutation. Red designates heterozygous fish and green designates homozygous mutant fish.