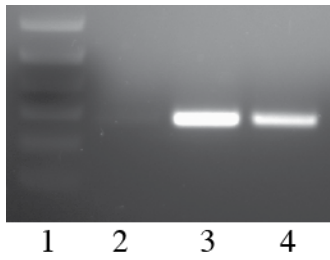


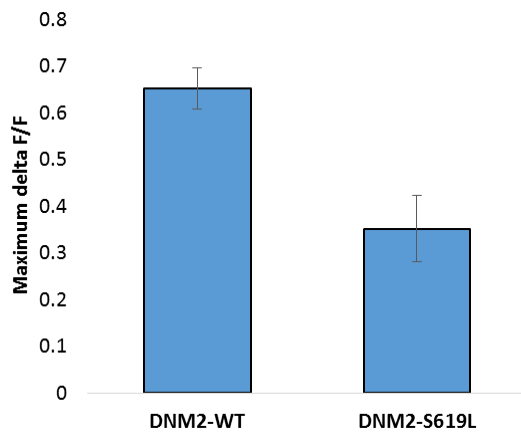
## SUPPLEMENTAL MATERIAL



### **Supplemental Figure 1: Confirmation of DNM2 RNA expression**

Embryos were injected with RNA made from either wild type human dynamin-2 cDNA (WT DNM2) or dynamin-2 S619L cDNA (DNM2-S619L) at the 1 cell stage. RNA was extracted at 2 days post fertilization and reverse transcribed with random primers.

DNM2 expression was confirmed by PCR with primers that recognize both DNM2 constructs. Lanes: 1- molecular weight standard, 2 – uninjected control, 3- WT DNM2, 4- DNM2-S619L.



**Supplemental Figure 2: Quantification of calcium intensity in DNM2 larval muscle**

Fluorescent intensity (deltaF/F) was measured during spontaneous contractions in 24 hpf DNM2-WT and DNM2-S619L larvae injected with GCaMP. The maximum fluorescent intensity within each recording period was identified, and DNM2-S619L larvae displayed a significant decrease in maximum fluorescent intensity as compared with DNM2-WT larvae (DNM2-WT, n=6; DNM2-S619L, n=5;  $p < 0.004$ , Student's t-test).