Supp. Fig. 1. Mating assays show that dFMRP and LARK interact. Growth of colonies on medium lacking Histidine indicates that *dfmr1* bait 60-3 interacts with a full-length LARK product.

Supp. Fig. 2. dFMRP amount is inversely correlated with LARK level in the PDF neurons. **A**. Representative images showing immunoreactivity for dFMRP, LARK and PDF in the large and small LN_v (PDF) neurons of flies with decreased (*pdf>larki*) or increased (*pdf>uas-lark*) LARK amounts. Images represent single 2-μm optical sections through PDF neurons (green, dFMRP, blue, PDF). Images showing the small LN_v neurons were enhanced to better depict PDF staining. Arrows indicate the positions of PDF neurons in each image. **B**. Quantification of dFMRP, LARK, and PDF pixel intensities in the two groups of ventral lateral neurons (PDF neurons). Pixel intensities for each genotype were normalized by expressing each as a percentage of the control genotype (*uas-larki* for *pdf>uas-larki* or *uas-lark* for *pdf>uas-lark*). Error bars indicate standard error of the mean (SEM). Asterisks represent statistically significant changes in mean pixel intensity compared to the control genotype (Student's t-test, $p<0.05$). The results shown in panel B represent the analysis of multiple PDF cells in three independent experiments (*uas-larki* – LNv, n=47; sLNv, n=53. *pdf>uas-larki* – lLNv, n=36; sLNv, n=36. *uas-lark* – lLNv, n=23, sLNv, n=17. *pdf>uas-lark* – lLNv, n=35; sLNv, n=31).