



Sup. Figure 7: Fisher's exact test between the proportions of differentially expressed genes from location, acceptance, and host use gene families, compared to non-HLAU genes (Ser/Thr Kinases and zinc-finger proteins). Bars connected by a line with a star on the top represent p -value < 0.05 . The pairwise analysis was performed between species with preference for *Opuntia* sp. (*D. buzzatii* and *D. m. wrigleyi*) and columnar cacti dwellers (*D. koepferae*, *D. m. mojavensis*, and *D. m. sonorensis*) in A and B. **A)** Fisher's exact test was calculated from differentially expressed genes in larvae. **B)** Fisher's exact test calculated from differentially

expressed genes in head. **C)** Fisher's exact test calculated from differentially expressed genes from *D. m. wrigleyi* with preference for *Opuntia* sp. and *D. arizonae* as a non-preferential cactus.