



S4 Fig. Kernel regression  $p$ -values of using kernels calculated from Jensen-Shannon distance matrices calculated from SV tables that have been agglomerated to different (Phylum through Species level)

taxonomic levels. Squares indicate omnibus  $p$ -values, which indicate whether there is a statistically meaningful hit at any taxonomic level, adjusting for multiple comparisons [2]. Triangles indicate kernel regression  $p$ -values for weighted UniFrac scores and are identical to ones reported in Tables 1 and S1.