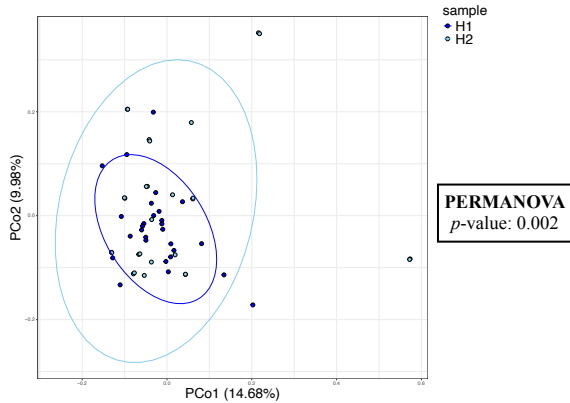
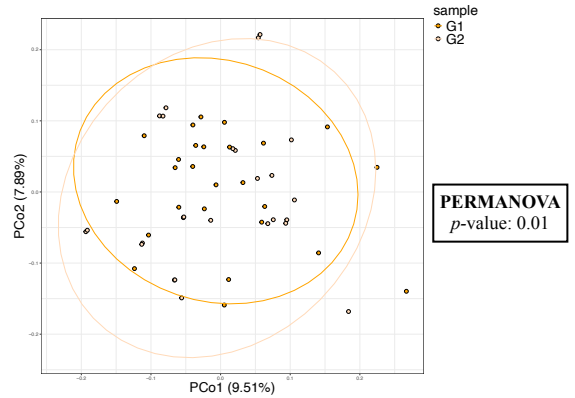
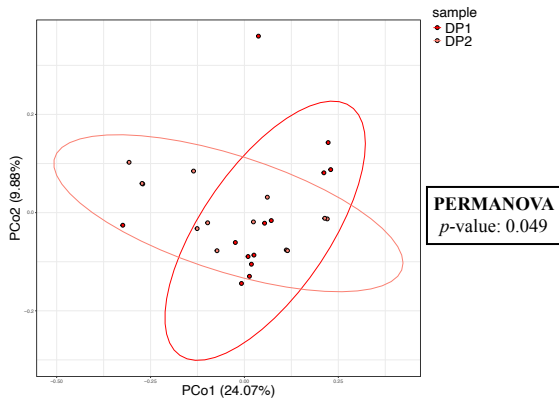
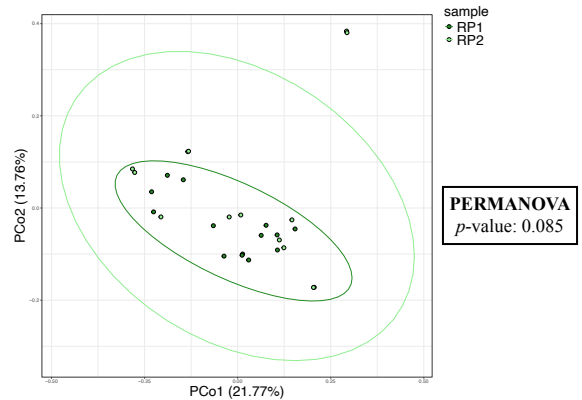
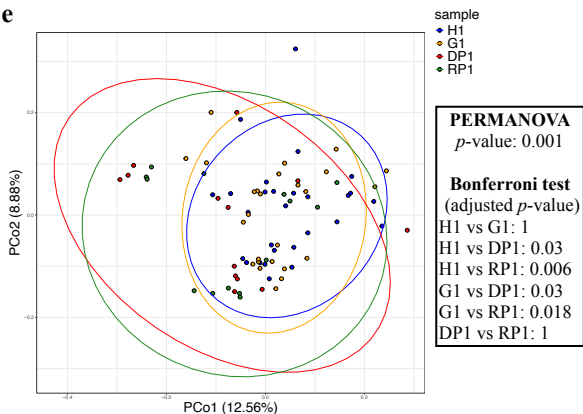
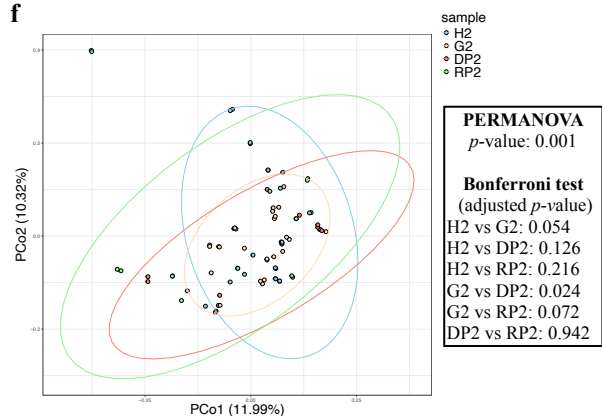


Fig. S6**a****b****c****d****e****f**

Supplementary Fig. S6 PCoA and PERMANOVA using Bray-Curtis distance based on the functional gene abundance from VFDB. Light colors indicate post-treatment samples for each group, contrasting with the darker colors for pre-treatment samples. The plots show each sample, and the ellipses indicate 95% confidence intervals. Group names are as indicated in Fig 1. (a-d) PCoA and PERMANOVA show longitudinal functional changes pre- and post-treatment using Bray-Curtis distance for the H, G, DP, and RP groups, respectively. (e, f) Multi-group comparisons between groups pre- and post-treatment using PCoA and PERMANOVA based on functional gene abundance.