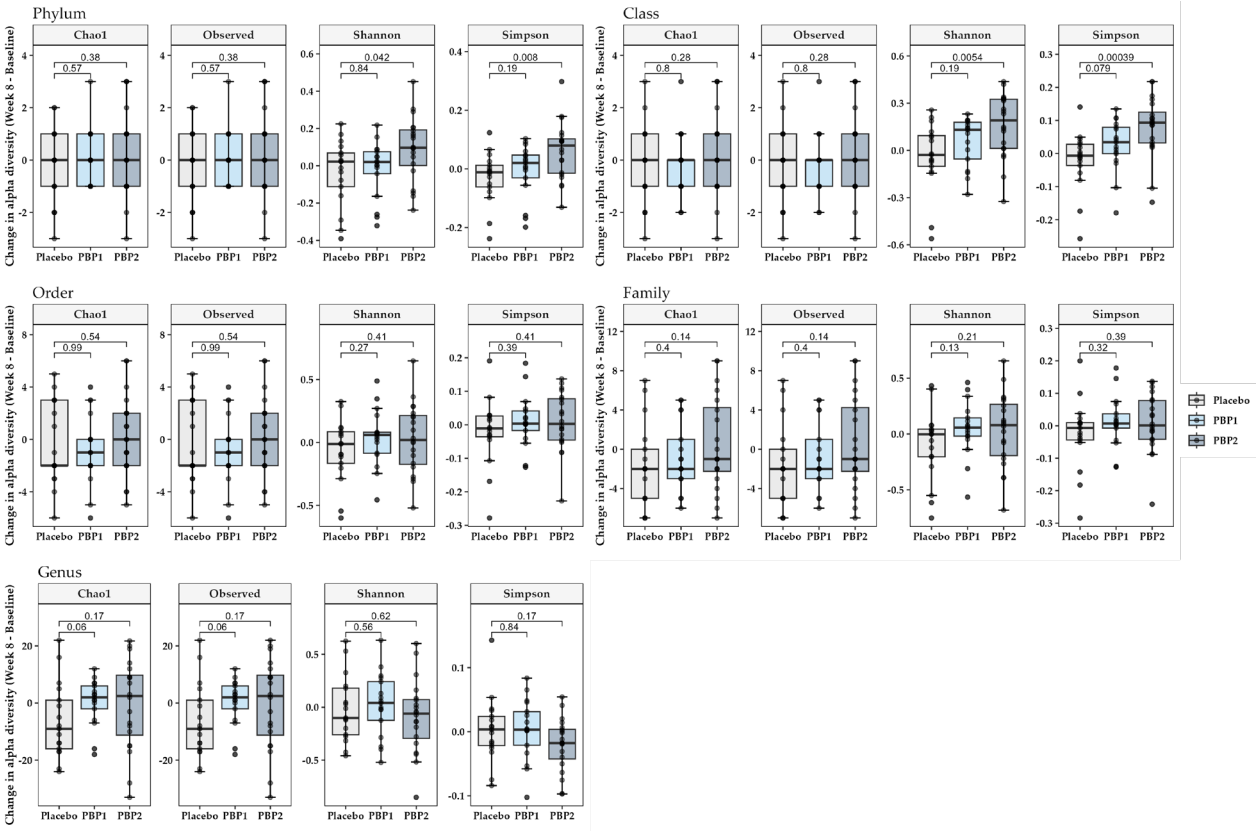

Supplementary Figure 5. Changes in alpha-diversity across taxonomic levels following PBP1 and PBP2 supplementation. Changes in alpha-diversity indices (Chao1, observed richness, Shannon, and Simpson) from baseline to Week 8 were evaluated at the phylum, class, order, family, and genus levels across the placebo, PBP1, and PBP2 groups. Statistical comparisons were performed using the Wilcoxon rank-sum test. Chao1 and observed richness analyses showed minimal changes at the phylum and class levels, whereas greater divergence was observed at the order, family, and genus levels.