



**Supplementary Fig. 1.** Effect of intervention on the alpha-diversity of gut microbiota. (A) Observed species Richness index. (B) Shannon Diversity Index. (C) Pielou\_J Uniformity index. (D) Pd\_faith Evolutionary diversity index. ab, there was no significant difference between groups with the same letters ( $P>0.05$ ); the difference between groups with different letters was statistically significant ( $P<0.05$ ). Bla-Pre-treat, the intervention group before intervention; Bla-1-treat, the intervention group after intervention; Con-Pre-treat, control group before intervention; Con-1-treat, control group before intervention.