

**Table S2** PERMANOVA analysis of  $\beta$ -diversity matrices.

<b>Comparison</b>	<b>Df</b>	<b>Sum of squares</b>	<b>F ratio</b>	<b>R2 value</b>	<b>p.value</b>	<b>p.adjusted sig</b>
ND vs HFD	1	1509.775	0.9377922	0.08573871	0.529	0.784
ND vs HFD50	1	2815.348	1.6488772	0.14154817	0.092	0.230
ND vs HFDMET	1	1277.368	0.7694624	0.07144854	0.759	0.784
HFD vs HFD50	1	2668.039	1.6530575	0.14185612	0.073	0.230
HFD vs HFDMET	1	1146.278	0.7316762	0.06817912	0.784	0.784
HFD50 vs HFDMET	1	2600.245	1.5625008	0.13513519	0.115	0.230

PERMANOVA of the association between bacterial community composition of ND, HFD, HFD50 and HFDMET groups. No significant differences were found between groups ( $p > 0.05$ ). DF: Degree of freedom, F: Pseudo- $F$ -statistic.