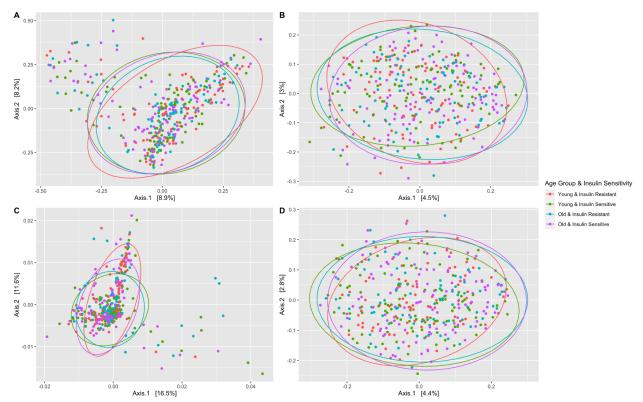
## **Supplemental Materials**



**Supplemental Figure S1.** No apparent differences in microbial composition of beta diversity with insulin sensitivity and age differences. Principle Coordinates Plots (PCoA) plots of different beta diversity metrics, including (A) Bray Curtis (B) Unweighted Unifrac (C) Weighted Unifrac and (D) Jaccard, displaying no distinct clustering between each group with respect to age and insulin sensitivity. The legend on the right shows the classification of each group. Statistical significance between age and insulin sensitivity was determined using PERMANOVA test (p<0.05), where no significant difference was observed in each diversity metric suggesting neither factor impact gut beta diversity.

## Supplemental Table S1. PERMANOVA test results of beta diversity metrics show no significant difference in age and insulin sensitivity

<b>Beta Diversity Metric</b>	Variable(s)	p-value
Bray Curtis	Age	0.123
	Insulin Sensitivity	0.647
Unweighted Unifrac	Age	0.086
	Insulin Sensitivity	0.539
Weighted Unifrac	Age	0.547
	Insulin Sensitivity	0.363
Jaccard	Age	0.063
	Insulin Sensitivity	0.879