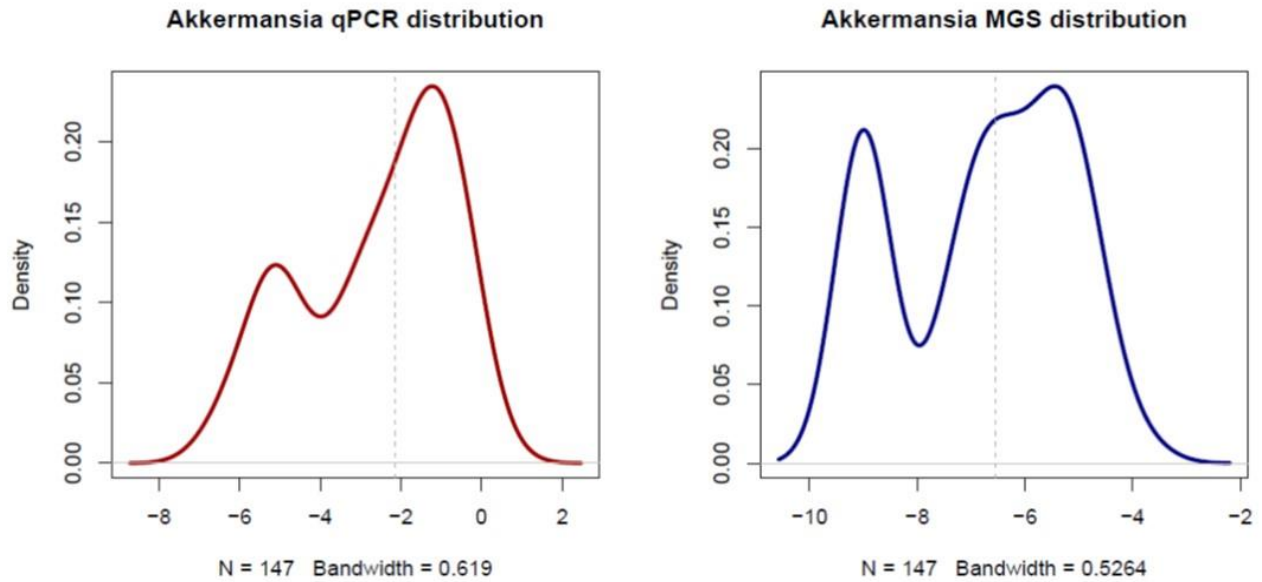
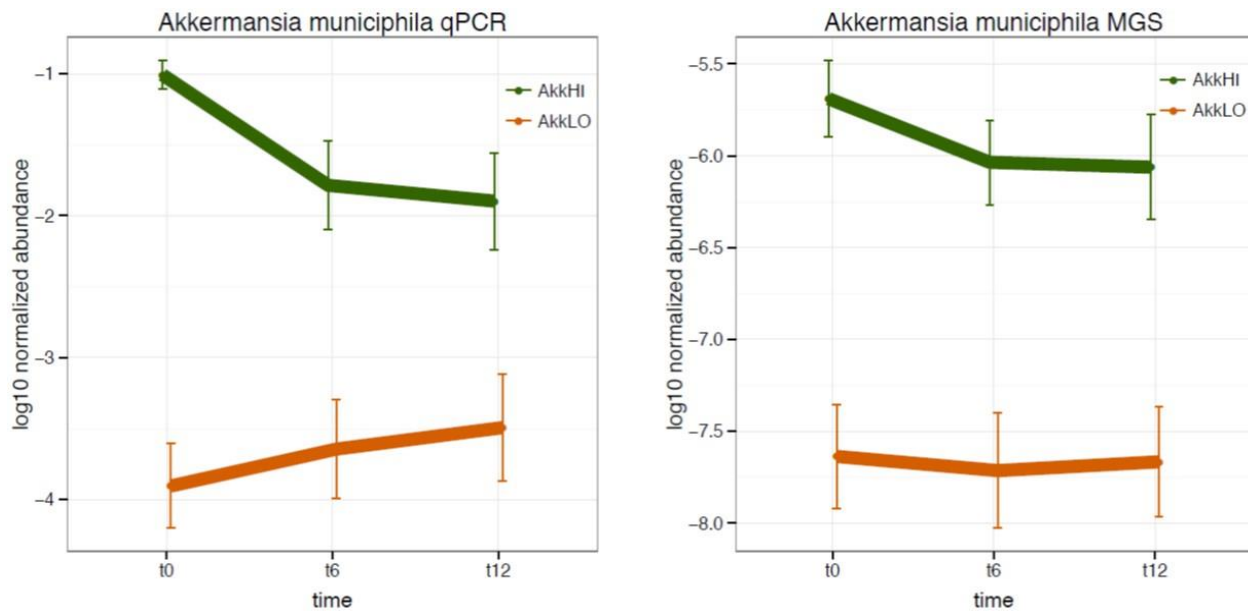


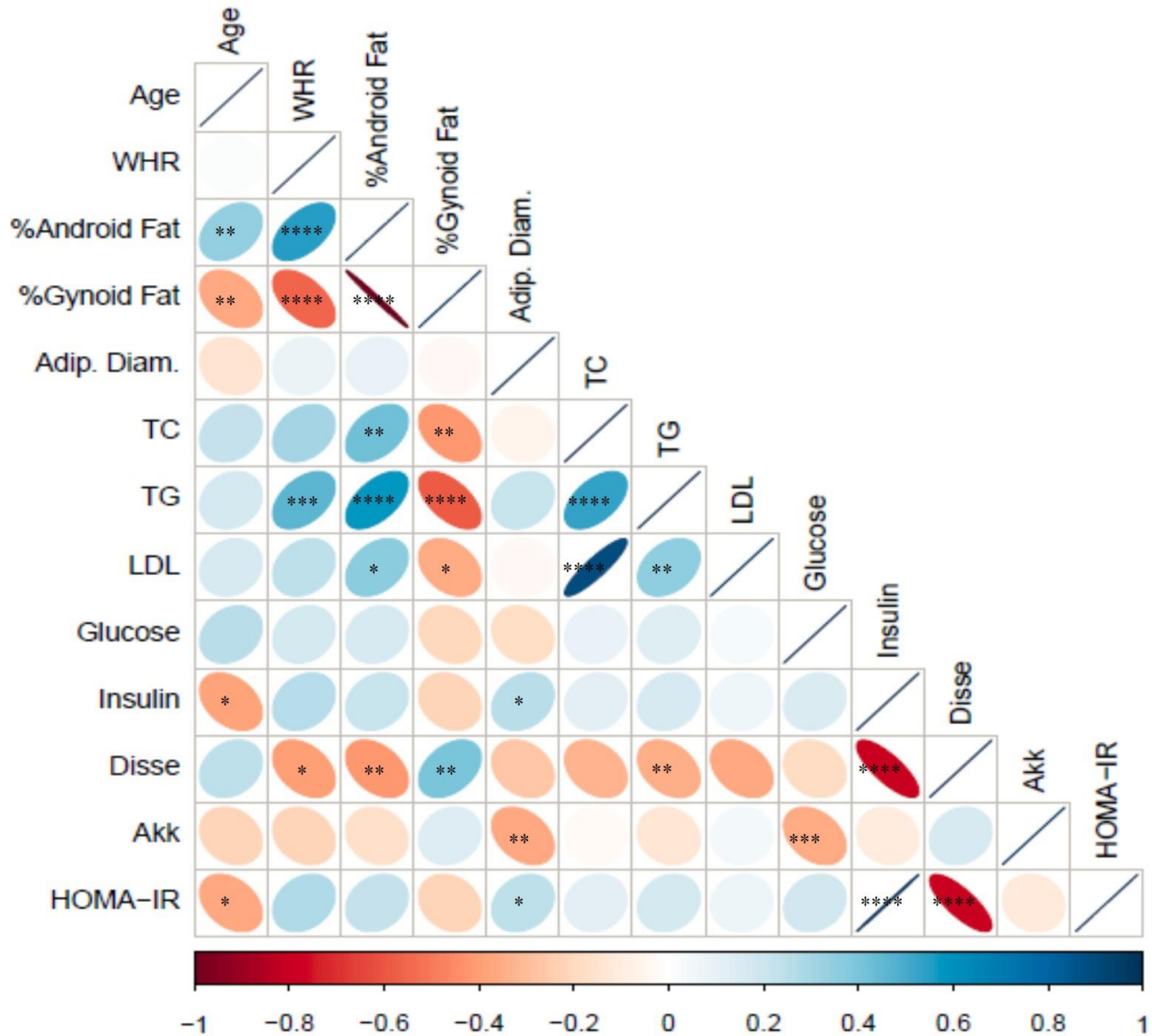
Supplementary Figure 1. *A. muciniphila* abundance distribution comparison between qPCR and QM.



Supplementary Figure 2. Comparison of changes in *A. muciniphila* abundance throughout dietary intervention between qPCR and QM.



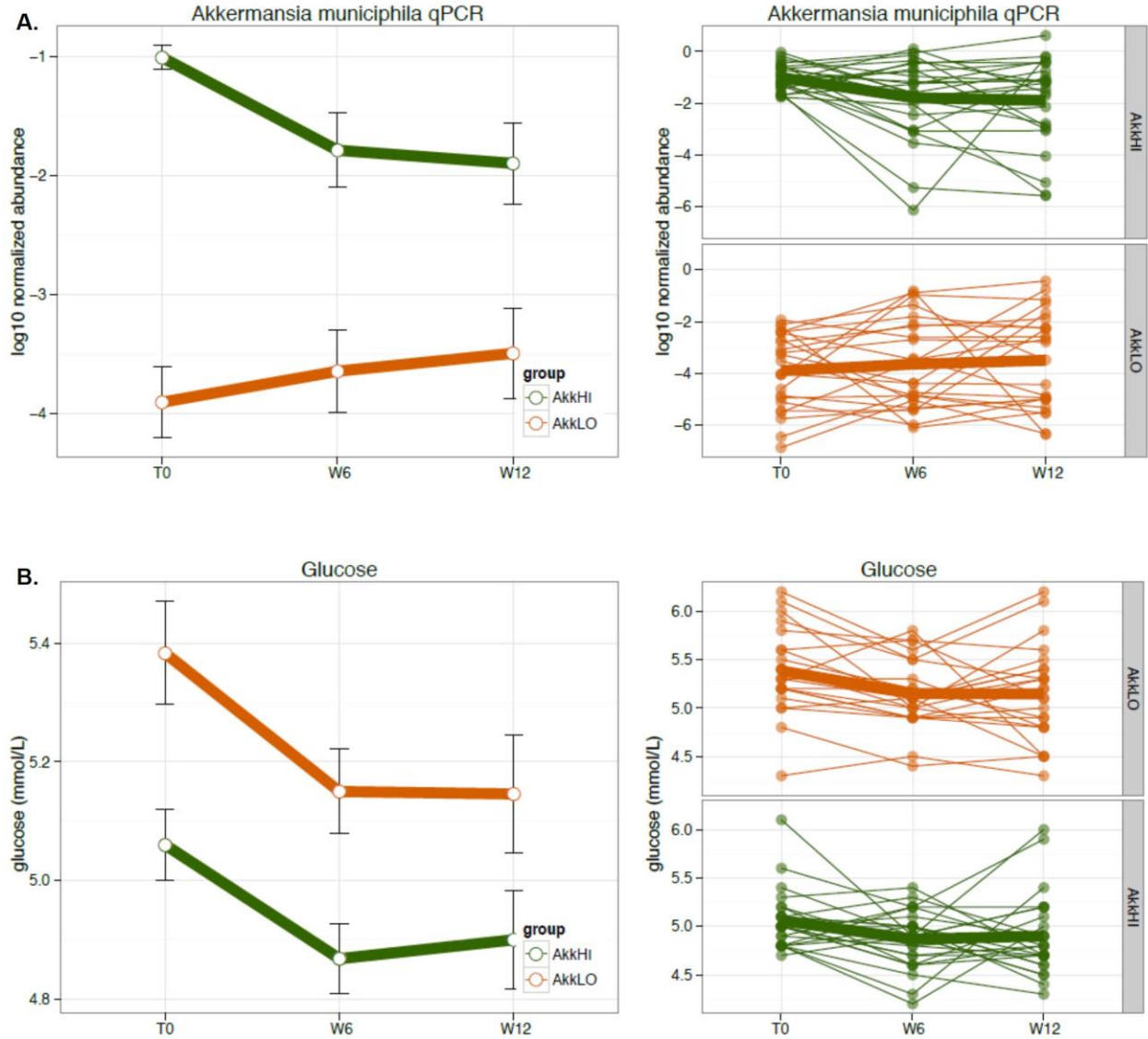
Supplementary Figure 3. Correlation matrix depicting the baseline association between relevant variables.



* $p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.001$; **** $p \leq 0.0001$

Supplementary Figure 4. Individual variations in *A. muciniphila* abundance and fasting glucose throughout the dietary intervention.

A: *A. muciniphila* individual kinetics. **B:** Fasting glucose individual kinetics.



Supplementary Figure 5. Clinical parameters that differed across *A. muciniphila* and gene count groups at different time points.

Kruskal-Wallis for trend followed by Wilcoxon Rank Sum test for individual comparisons with Bonferroni adjustment. Akk LO = *A. muciniphila* below the median; Akk HI = *A. muciniphila* at or above the median; HGC = high gene count; LGC = low gene count. Sample sizes are Akk LO, LGC N=9; Akk HI, LGC N=9; Akk LO, HGC N=11; Akk HI, HGC N=16.

