



**Figure S3:** Significant Pearson correlations between ASVs and SCFAs at T<sub>0</sub> (A) and T<sub>1</sub> (B) with motricity index (MI\_TOT). (A1) Christensenellaceae; (A2) Acetic acid; (B1) *Bacteroides*; (B2) *Clostridium* (Lachnospiraceae). Only statistically significant ( $p$ -value  $\leq 0.05$ ) correlations between ASVs, SCFAs and MI\_TOT were showed.