

Figure S1. Effect of *L. casei* and ultrasound-inactivated *L. casei* on low-frequency waves (LF), high-frequency waves (HF), LF/HF, and spontaneous baroreflex sensitivity (SBRS). Groups: CTL group, HFD group, HFD-LC group and HFD-ILC group. Values are average SD. *, $p < 0.05$ versus CTL group; #, $p < 0.05$ versus HFD group, using one-way ANOVA and post hoc test from Turkey.

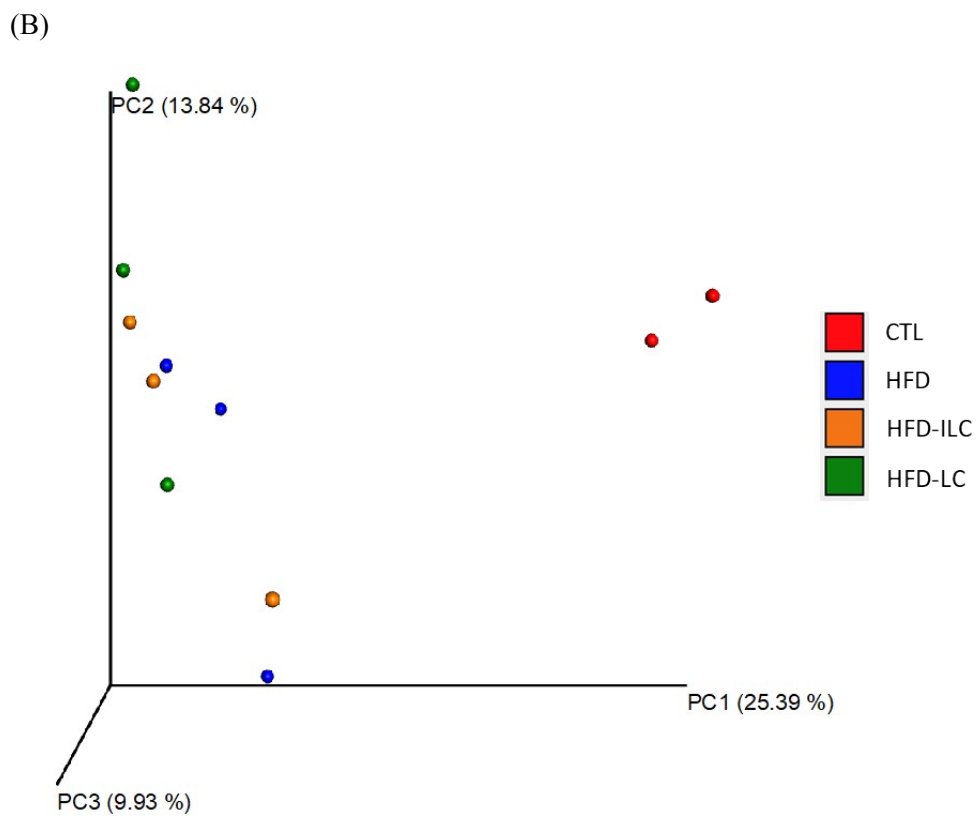
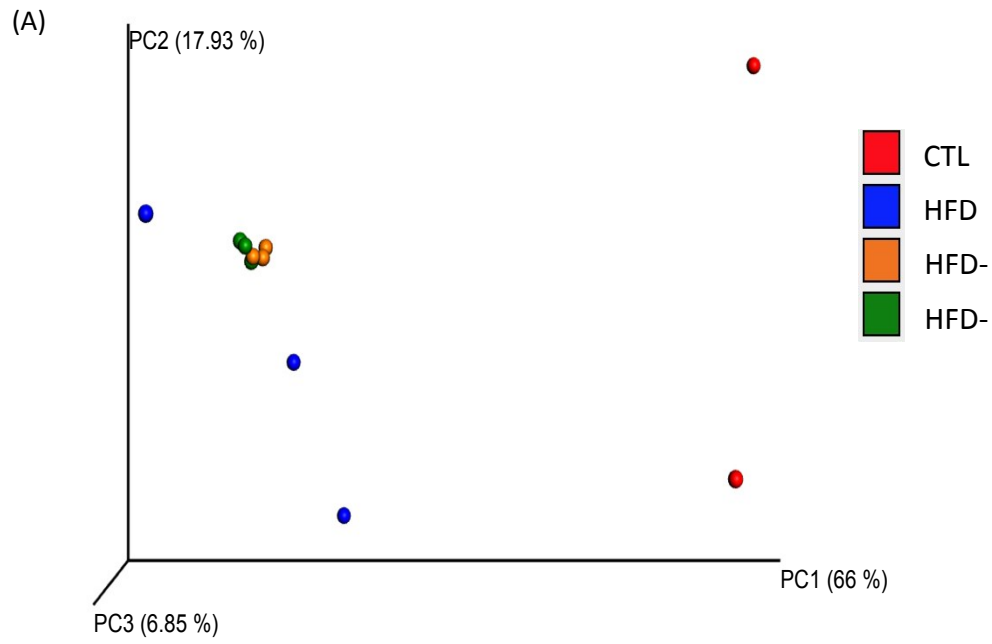


Figure S2. Weighted (A) and non-weighted (B) data of beta-diversity. Groups: control group (CTL), high-fat diet group (HFD), high-fat diet + *L. casei* (HFD-LC) and high-fat diet + ultrasound-inactivated *L. casei* (HFD-ILC).

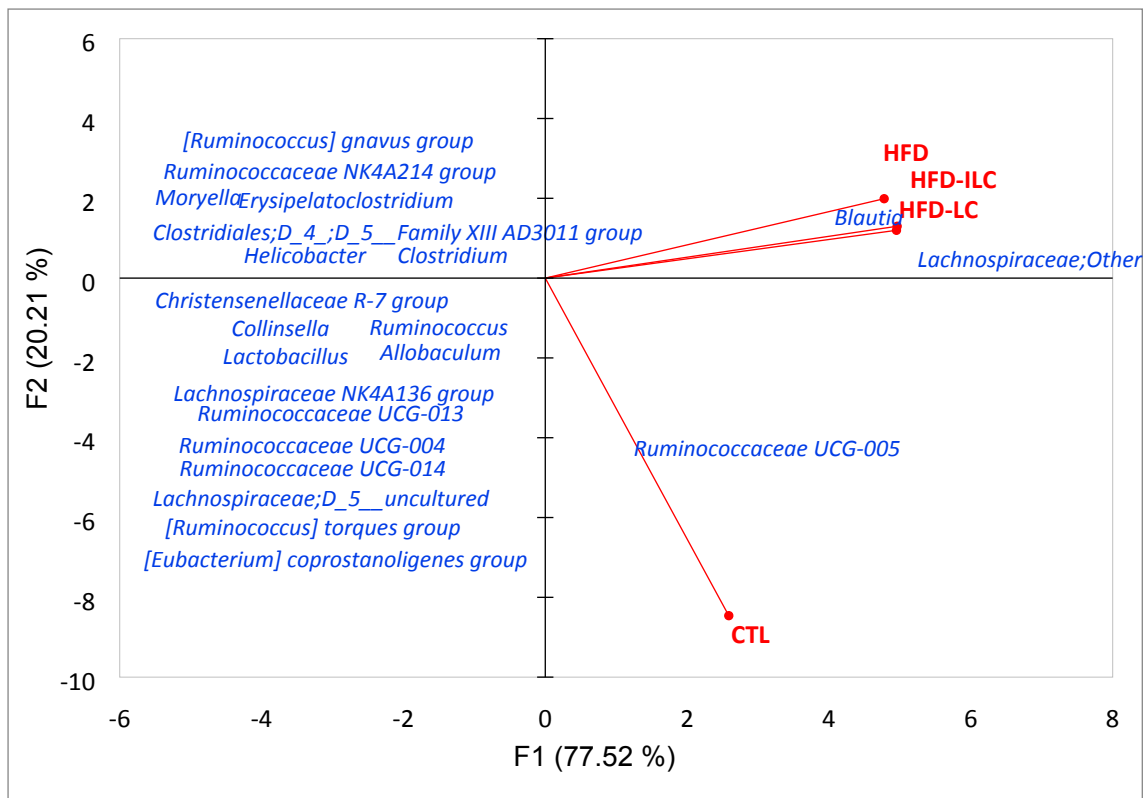


Figure S3. Principal component analysis at bacterial order and the family level with relative abundance obtained by 16S rRNA gene pyrosequencing analysis. Only OTUs with abundance values above 0.1% in at least three samples are shown. Groups: control group (CTL), high-fat diet group (HFD), high-fat diet + *L. casei* (HFD-LC) and high-fat diet + ultrasound-inactivated *L. casei* (HFD-ILC).