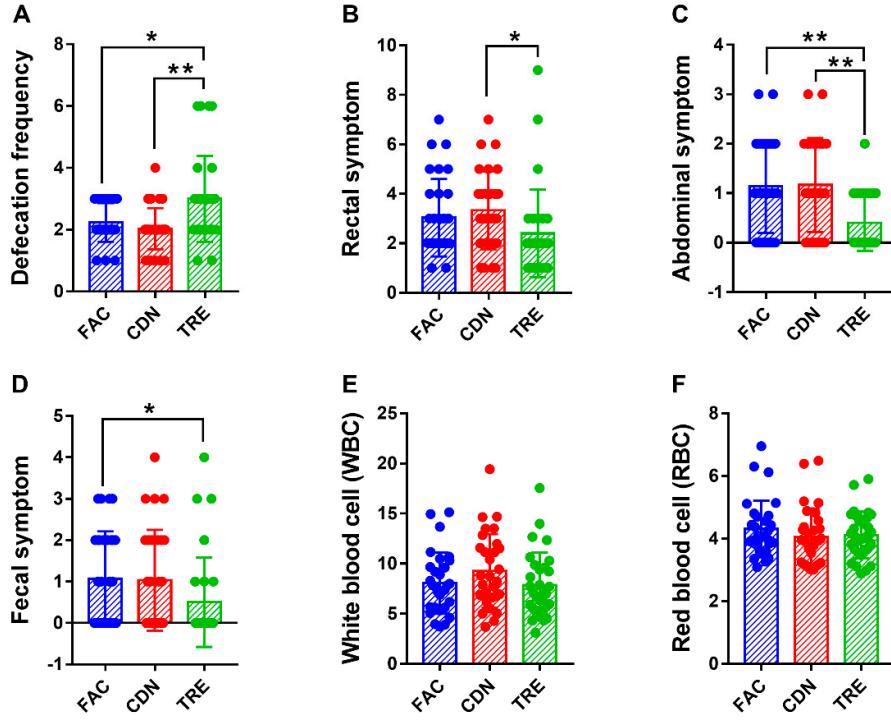
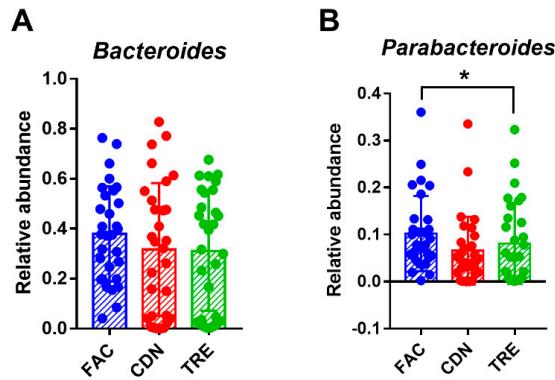


## Supplementary Materials



**Figure S1.** *L. rhamnosus* JYLR-127 improved post-surgery constipation symptoms and mediated anti-inflammation and anti-infection in the organism. The comparison of other indicators including (A) Defecation frequency, (B) Rectal symptom, (C) Abdominal symptom, (D) Fecal symptom, (E) White blood cell (WBC) and (F) Red blood cell (RBC) was visualized here. FAC: pre-intervention group (N = 50); CDN: placebo control group (N = 47); TRE: *L. rhamnosus* JYLR-127 group (N = 49). \*  $p < 0.05$ , \*\*  $p < 0.01$ .



**Figure S2.** *L. rhamnosus* JYLR-127 altered gut microbiota composition in fracture patients with post-surgery constipation at genus level. The relative abundance of (A) *Bacteroides* and (B) *Parabacteroides* were presented. FAC group: N = 30; CDN group: N = 30; TRE group: N = 30, \*  $p < 0.05$ .