

Figure S1. The community richness and diversity for cefuroxime treatment. A: *Sobs* index; B: *Chao* index; C: *Shannon* index; D: *Simpson* index.

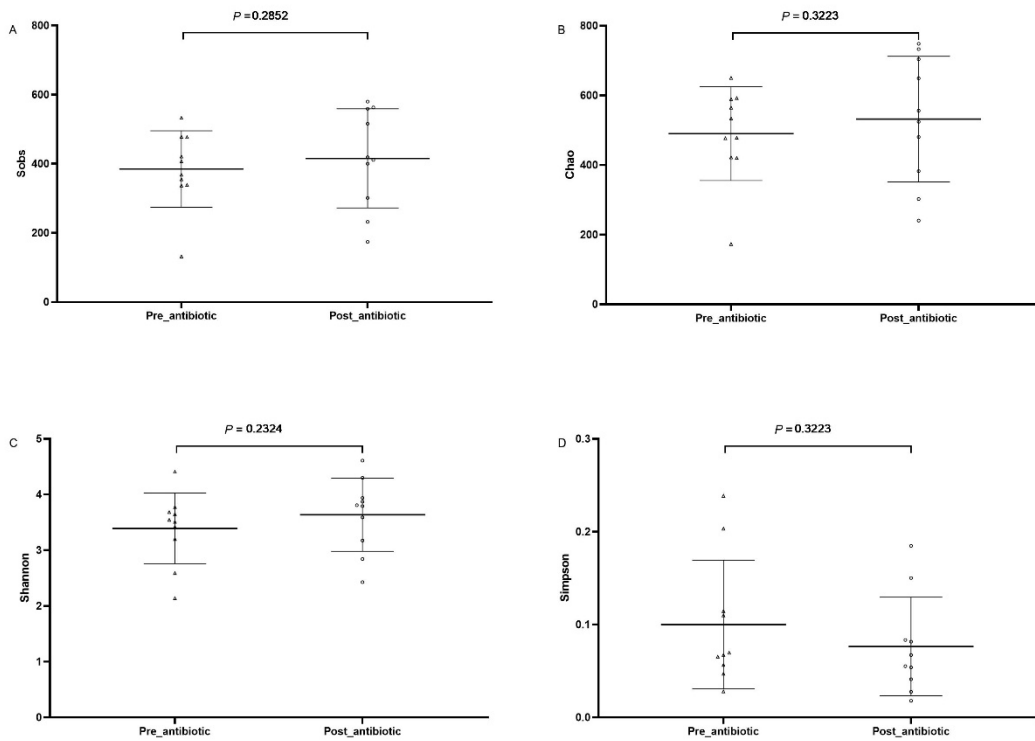


Figure S2. The community richness and diversity for ceftazidime treatment. A: *Sobs* index; B: *Chao* index; C: *Shannon* index; D: *Simpson* index.

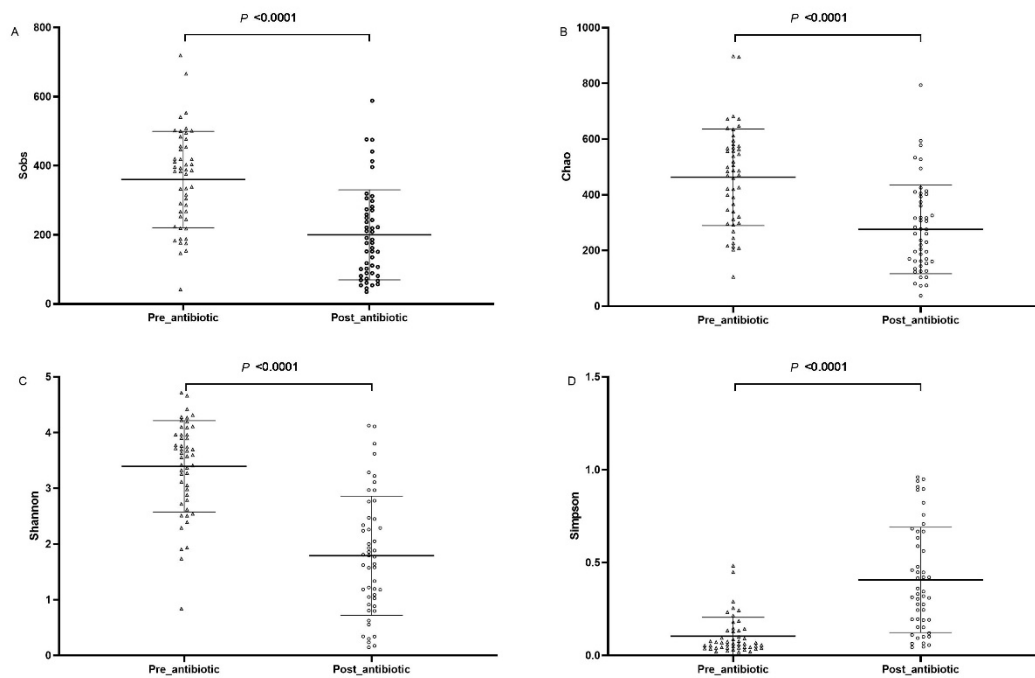


Figure S3 The community richness and diversity for sulperazone treatment. A: *Sobs* index; B: *Chao* index; C: *Shannon* index; D: *Simpson* index.

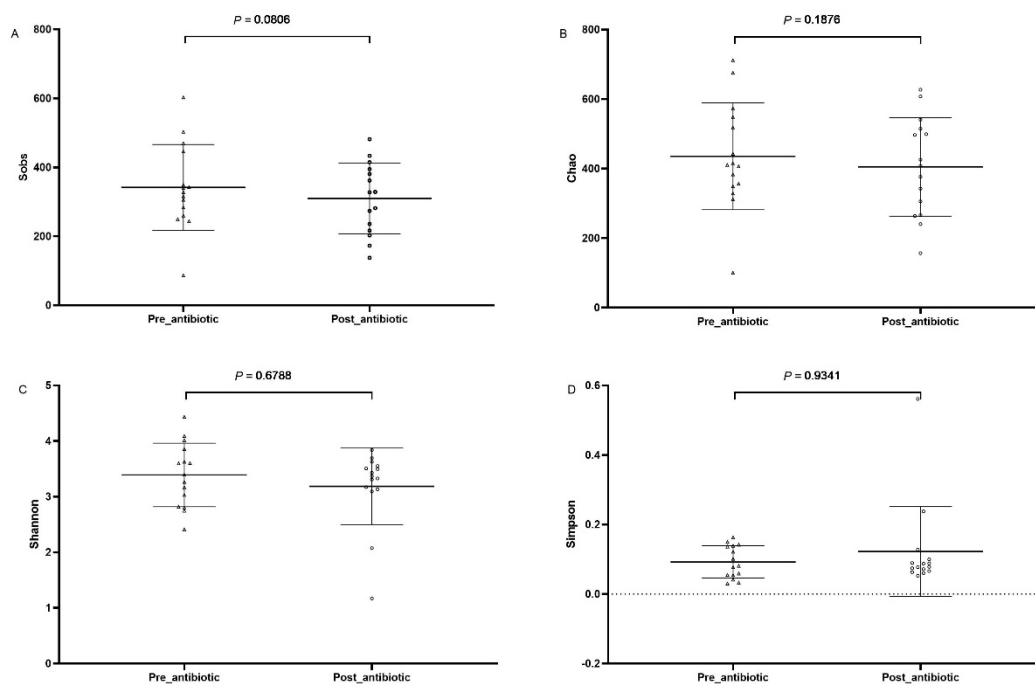


Figure S4. The community richness and diversity for tienam treatment. A: *Sobs* index; B: *Chao* index; C: *Shannon* index; D: *Simpson* index.

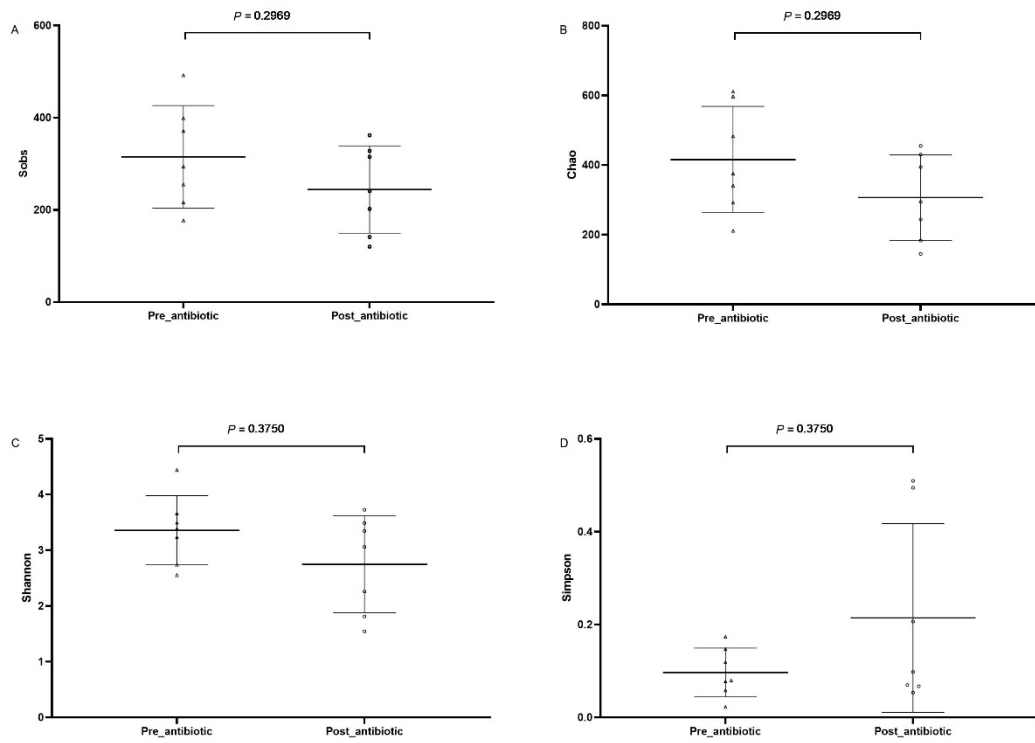


Figure S5. The community richness and diversity for meropenem treatment. A: *Sobs* index; B: *Chao* index; C: *Shannon* index; D: *Simpson* index.

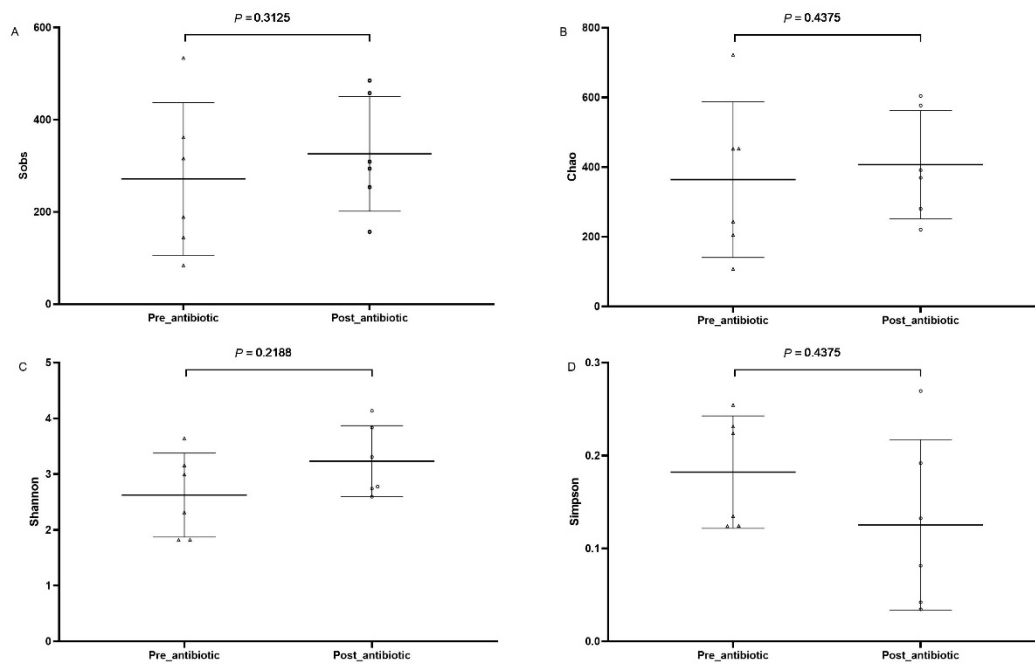


Figure S6. The community richness and diversity for quinolones treatment. A: *Sobs* index; B: *Chao* index; C: *Shannon* index; D: *Simpson* index.

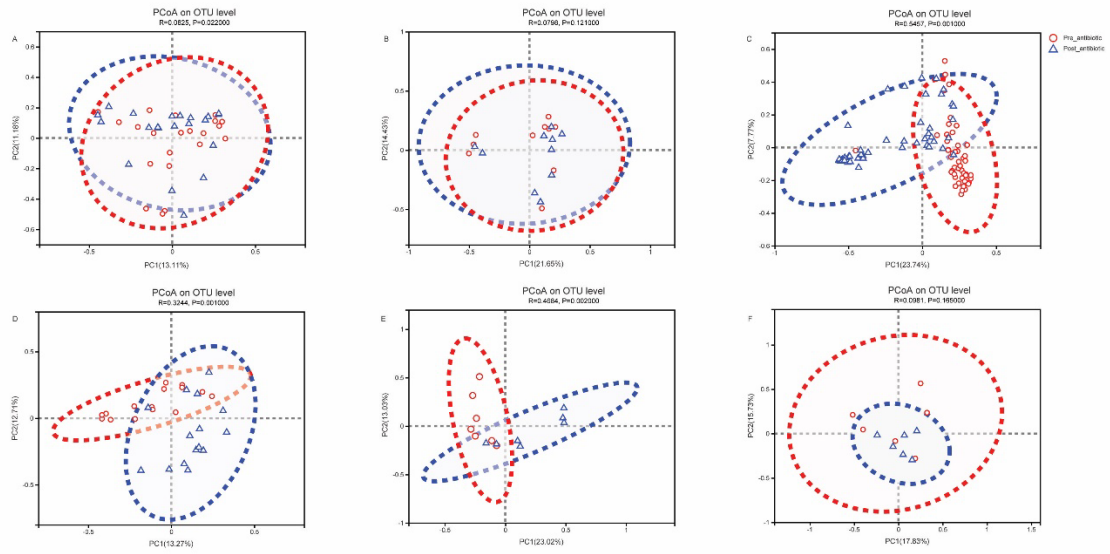


Figure S7. PCoA (principal coordinates analysis) of gut microbiota for different single antibiotic treatments. A: cefuroxime; B: ceftazidime; C: sulperazone; D: tienam; E: meropenem; F: quinolones. The dotted line represents the 95% confidence interval line.

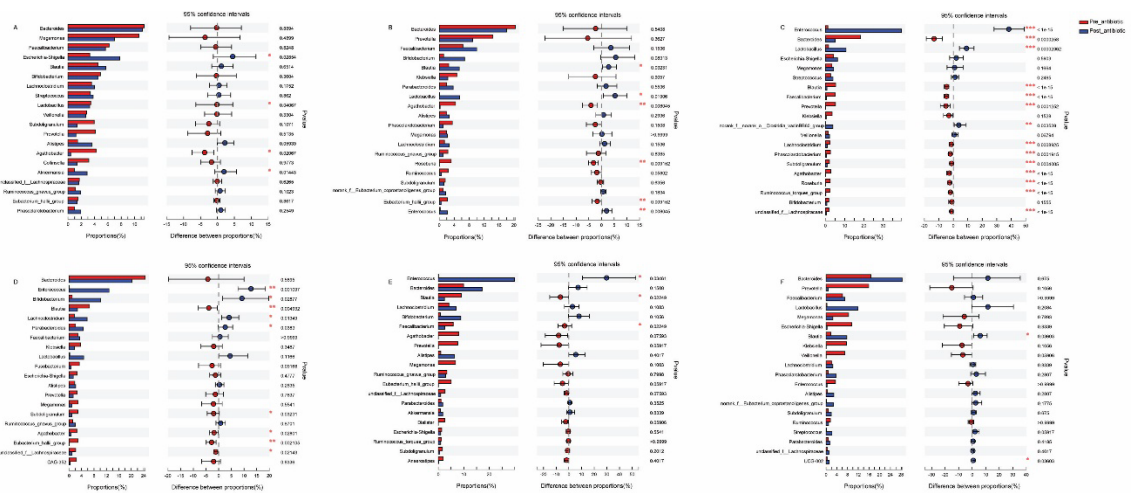


Figure S8. Comparison of the top 20 bacterial species for different single antibiotic treatments. A: cefuroxime; B: ceftazidime; C: sulperazone; D: tienam; E: meropenem; F: quinolones.

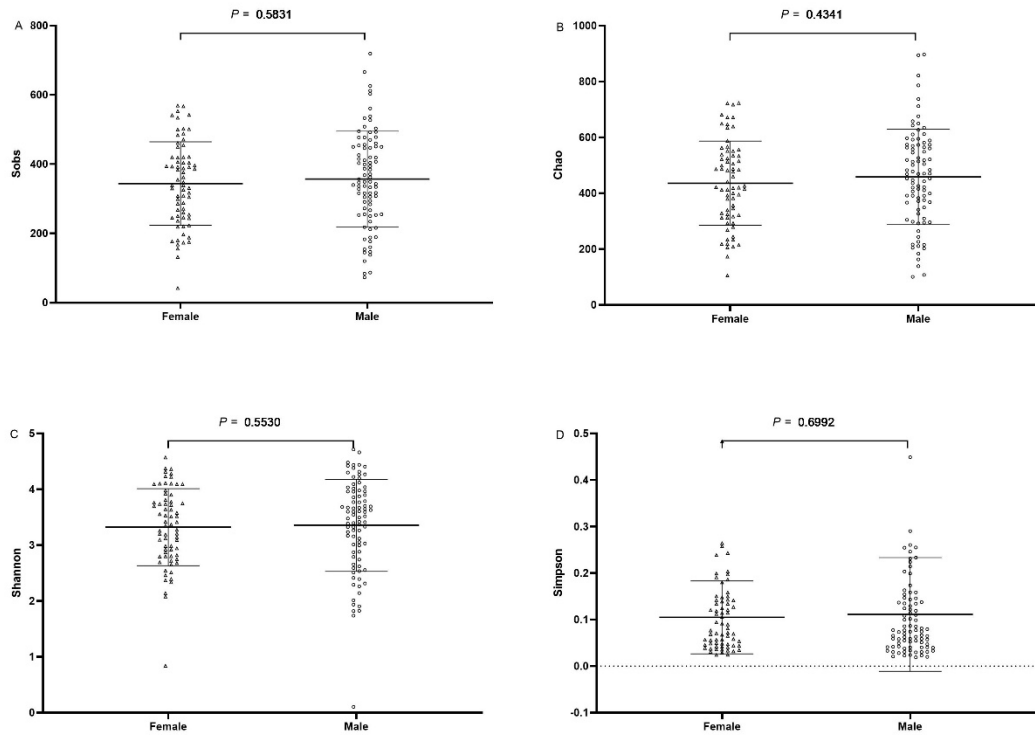


Figure S9. The community richness and diversity of gut microbiota for sex. A: *Sobs* index; B: *Chao* index; C: *Shannon* index; D: *Simpson* index.

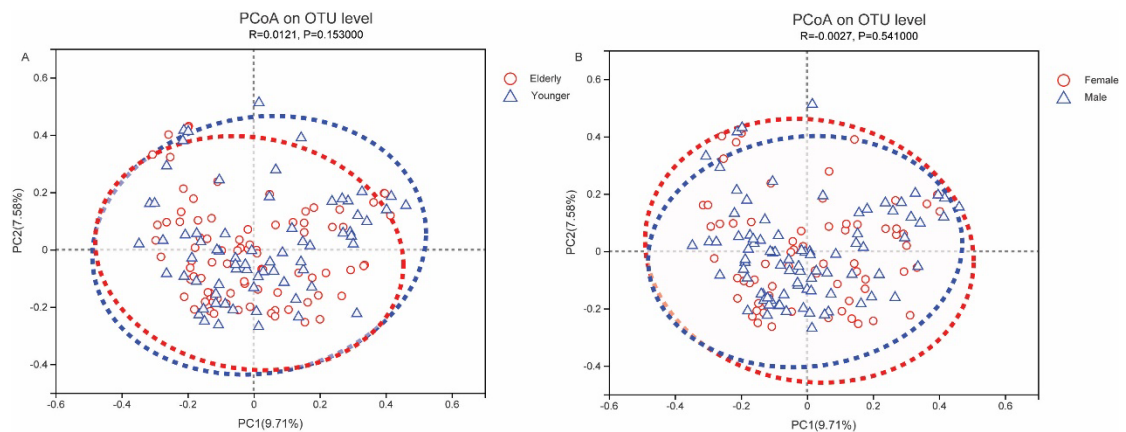


Figure S10. PCoA (principal coordinates analysis) of gut microbiota for age and sex. A: age; B: sex. The dotted line represents the 95% confidence interval line.

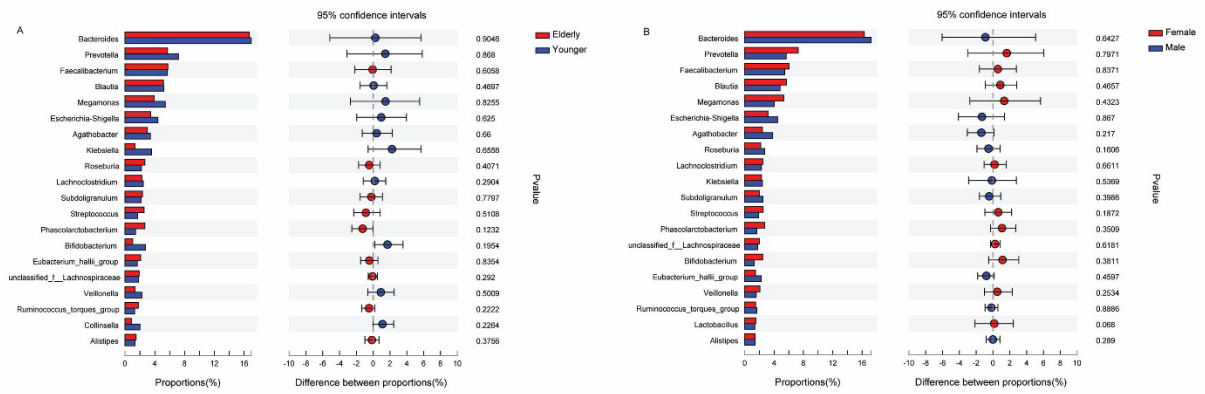


Figure S11. Comparison of the top 20 bacterial species between age and sex. A: age; B: sex.

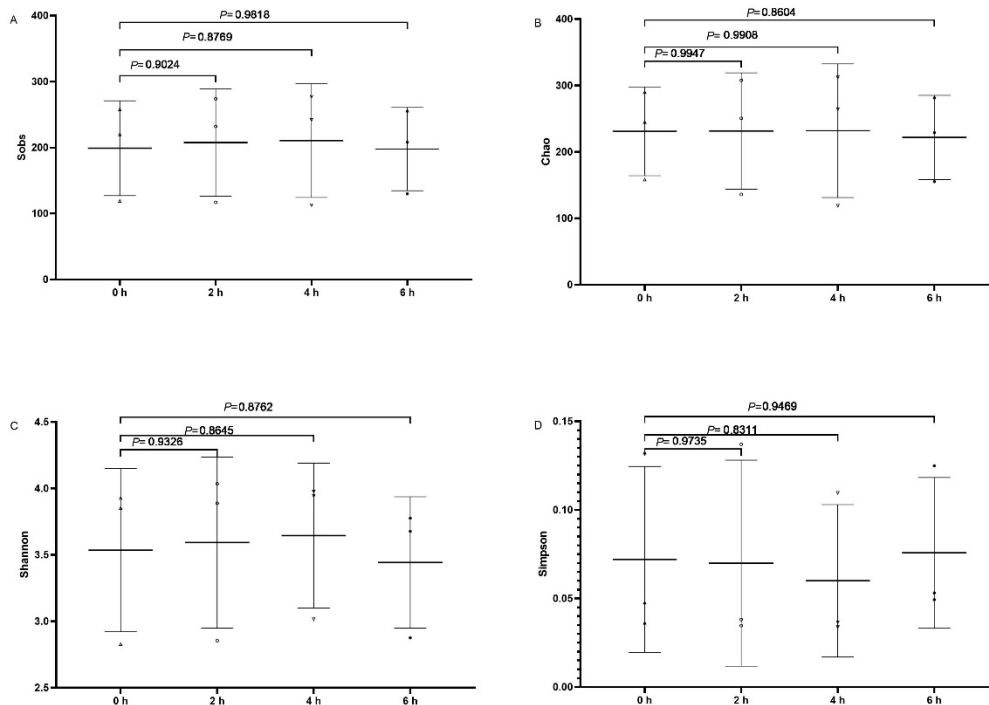


Figure S12. The community richness and diversity of gut microbiota for healthy volunteers. A: *Sobs* index; B: *Chao* index; C: *Shannon* index; D: *Simpson* index.

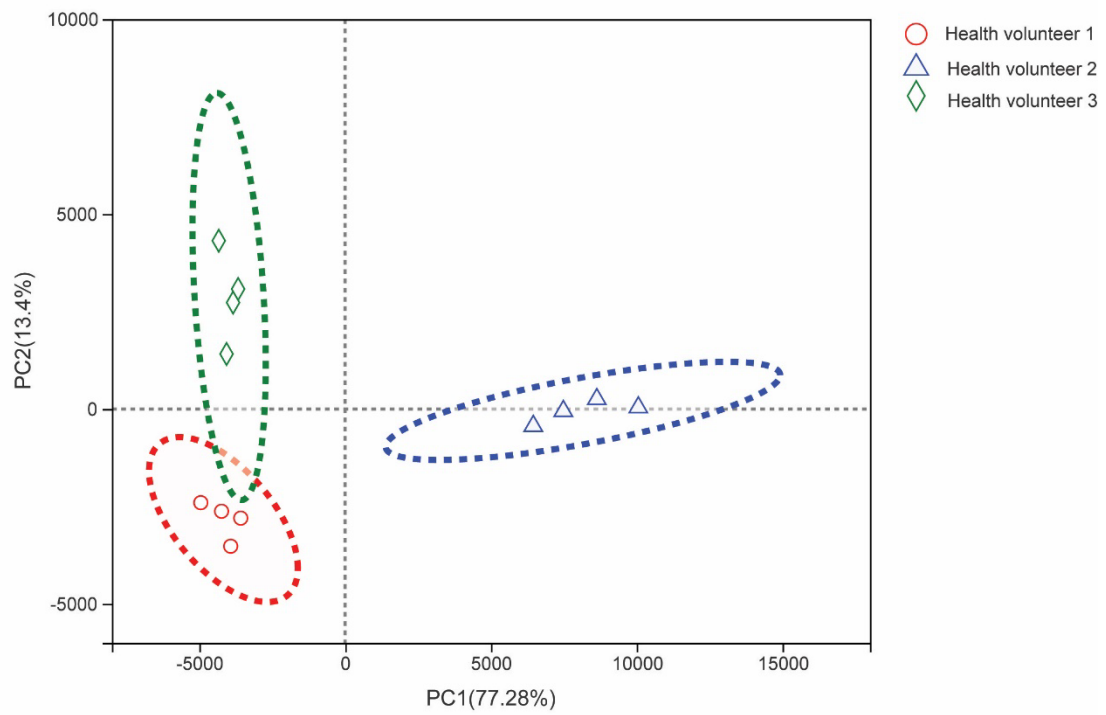


Figure S13. PCoA (principal coordinates analysis) of gut microbiota for healthy volunteers. The dotted line represents the 95% confidence interval line.

Kruskal-Wallis H test bar plot

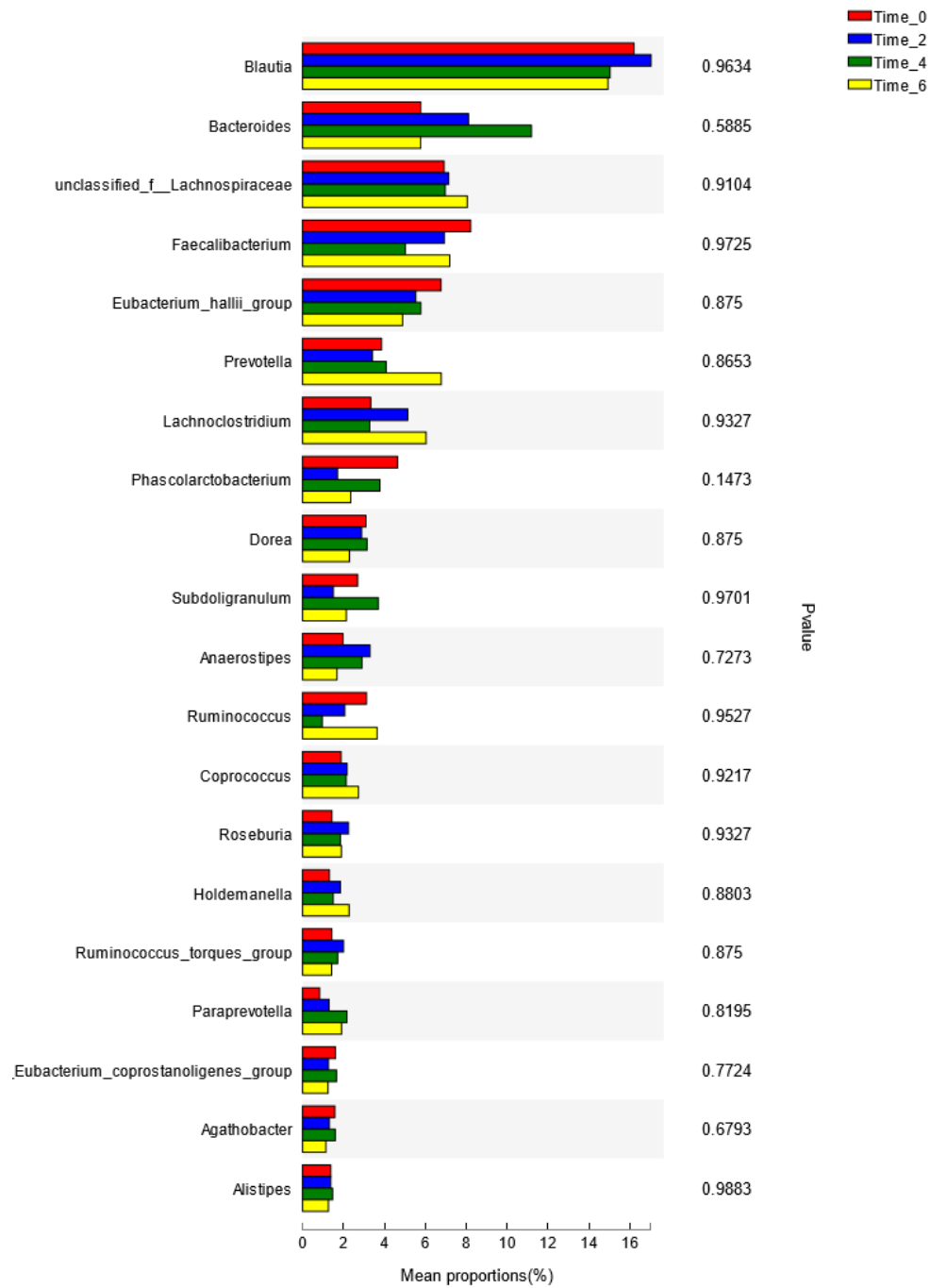


Figure S14. Comparison of the top 20 bacterial species for healthy volunteers.

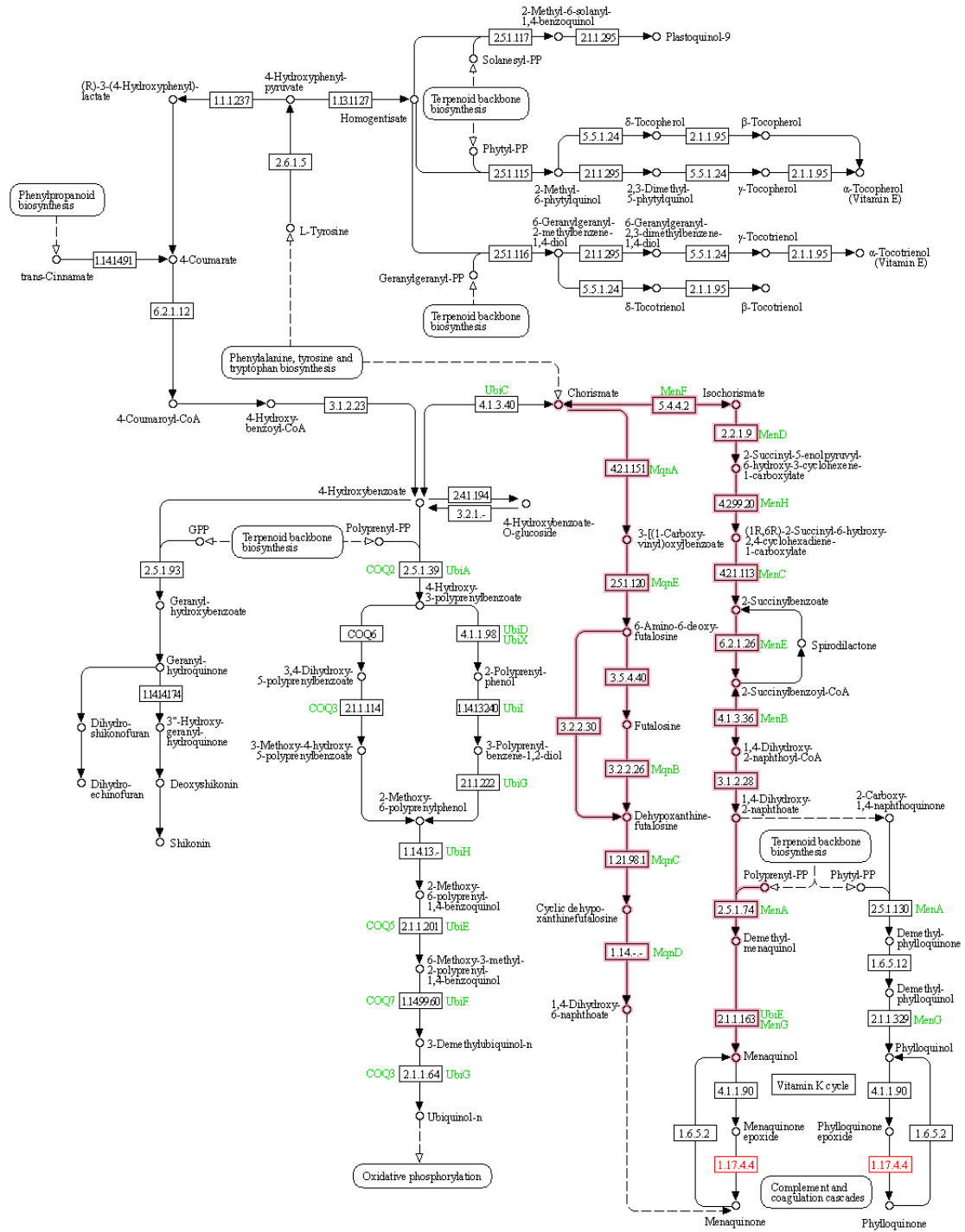


Figure S15. The pathway modules of menaquinone biosynthesis with the highlighted red line.