

Supplementary Material

Table S1 Characteristics of participants

Parameter	Mean	SEM
Age	27.9	0.7084
BMI	21.71	0.5628
Parity	0.513	0.100
Spontaneous labor (n)	23	
Caesarean section (n)	8	

BMI: body mass index.

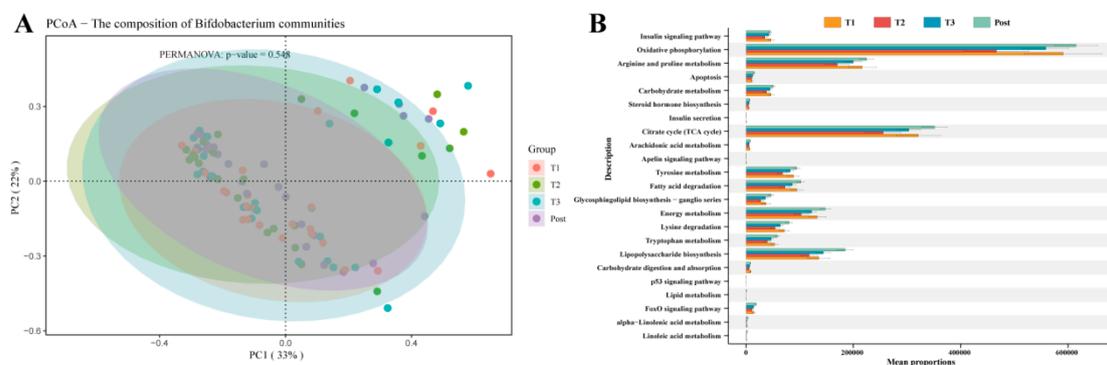


Figure S1 The composition of *Bifidobacterium* communities (A) and microbial functions altered during pregnancy (B). T1: first trimester; T2: second trimester; T3: third trimester; Post: postpartum.

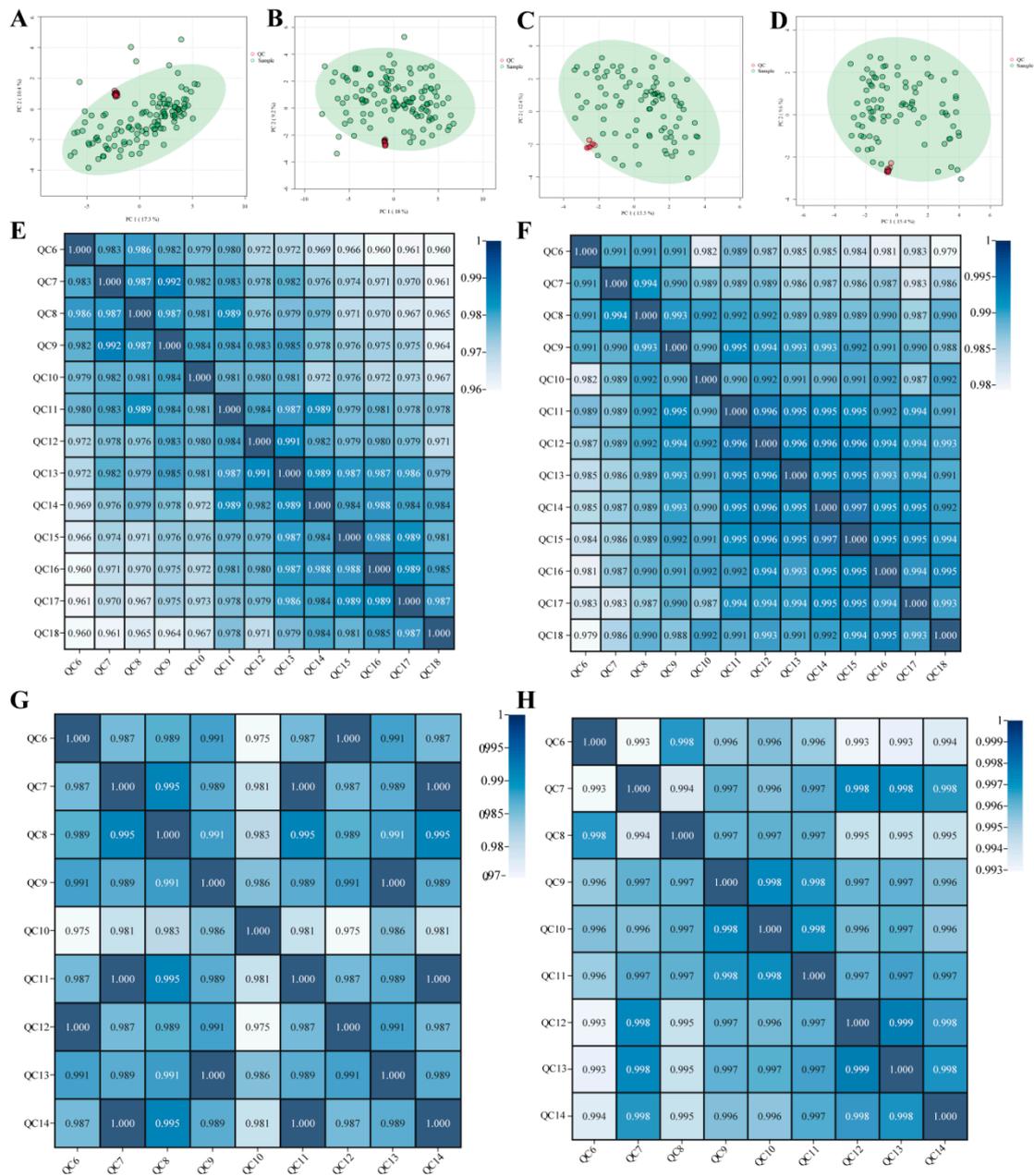


Figure S2 Quality control (QC) assessment for non-targeted metabolomics in faecal and serum samples. PCA score plots for all stool samples and QC samples in ESI⁺ (A) and ESI⁻ mode (B). PCA score plots for all serum samples and QC samples in ESI⁺ (C) and ESI⁻ mode (D). Spearman's correlation analysis for faecal samples in ESI⁺ (E) and ESI⁻ (F) mode. Spearman's correlation analysis for faecal samples in ESI⁺ (G) and ESI⁻ (H) mode.

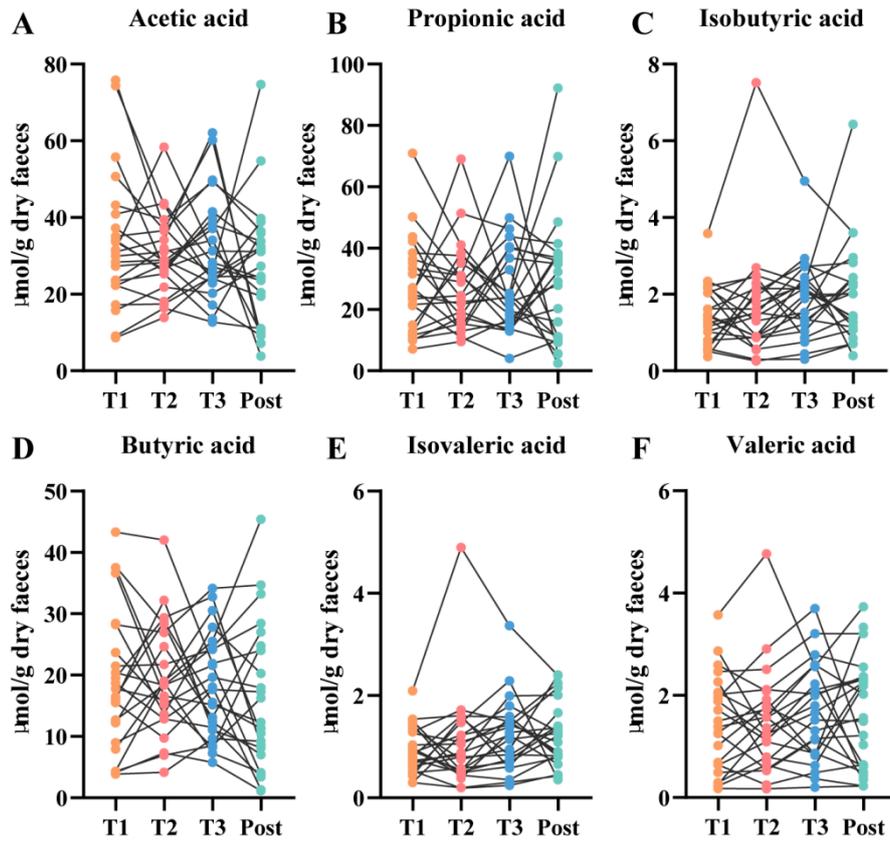


Figure S3 Temporal changes of short-chain fatty acids levels during pregnancy. (A) Acetic acid. (B) Propionic acid. (C) Isobutyric acid. (D) Butyric acid. (E) Isovaleric acid. (F) Valeric acid.