

Modulation of gut microbiota and hypoglycemic/hypolipidemic activity of flavonoids from the fruits of *Lycium barbarum* on high-fat diet/streptozotocin-induced type 2 diabetic mice

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Target gene	Primer Sequence (5' - 3')	Annealing T (°C)
GAPDH	FW: GGACTTACAGAGGTCCGCTT RV: CTATAGGGCCTGGGTCAGTG	59
TLR-4	FW: GCTCTCAGCCATCCACAAAG RV: GAGTCGGGAAGAGGAAGAGG	60
TNF- α	FW: CTCATGCACCACCATCAAGG RV: ACCTGACCACTCTCCCTTTG	60
IL-6	FW: TAGTCCTTCCTACCCCAATTT RV: TTGGTCCTTAGCCACTCCTTC	60
IL-10	FW: AGTACAGCCGGGAAGACAAT RV: TCTAGGAGCATGTGGCTCTG	59
IFN- γ	FW: AGCTCTTCCTCATGGCTGTT RV: GGTCAACCAACCACAAGCAT	59
GK	FW: AAAACACGTATGGAACAGGGTG RV: TTAGCCAGCGGATTACAGCA	60
G6Pase	FW: TCTACCTTGCGGCTCACTTTC RV: GAAAGTTTCAGCCACAGCAAT	59
PEPCK	FW: GCAGAGCATAAGGGCAAGGT RV: TTGCCGAAGTTGTAGCCAAA	59
PFK	FW: ACCGTGGACCTGGAGAAA RV: AGCCCTGACAGCAGCATT	60
PPAR α	FW: TCATCAAGAAGACCGAGTCC RV: CCTCTTCATCCCCAAGCGTA	60
PPAR γ	FW: GCTGAACGTGAAGCCCATCG RV: GGCGAACAGCTGAGAGGACT	60
FAS	FW: GGCACCTATGGCGAGGACTT RV: GCCCTCCCGTACACTCACTC	60
ACC	FW: AAAGGCTATGTGAAGGATG RV: TCTGAAGAGGTTAGGGAAG	59
SREBP-1c	FW: GGCACCTAAGTGCCCTCAACCT RV: GCCACATAGATCTCTGCCAGTGT	60

Table S1. Primer sequences used in RT-qPCR assays in colonic tissue.

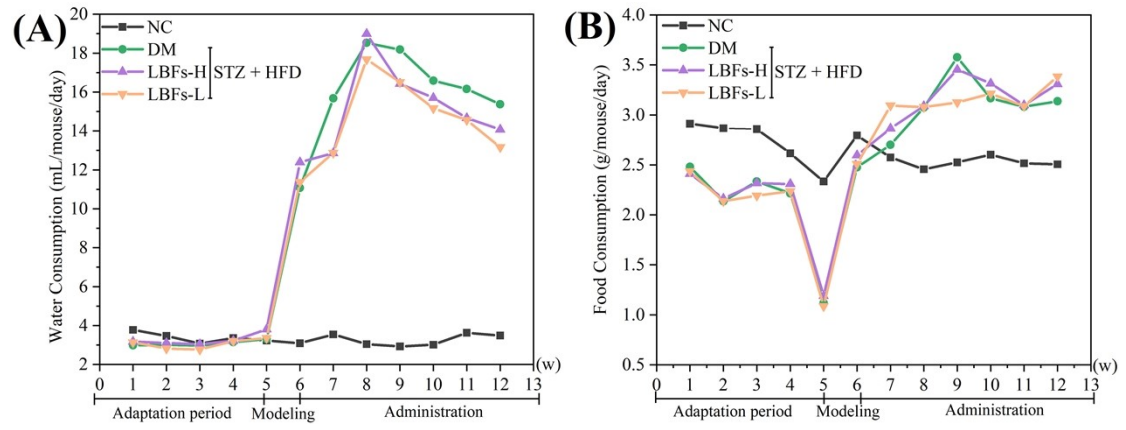


Fig. S1. Water consumption (A) and food consumption (B) of the four groups.

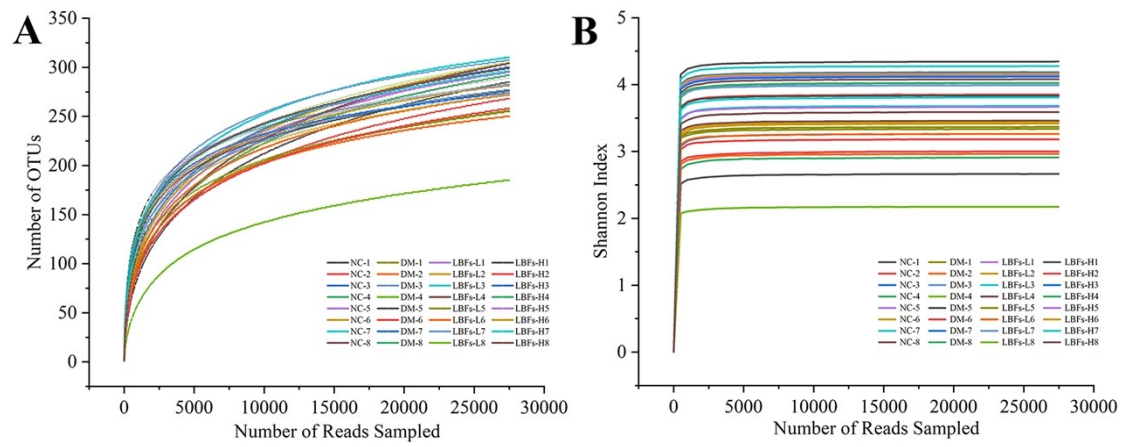


Fig. S2. Rarefaction curves (A) and Shannon-Wiener curves (B) of the four groups.

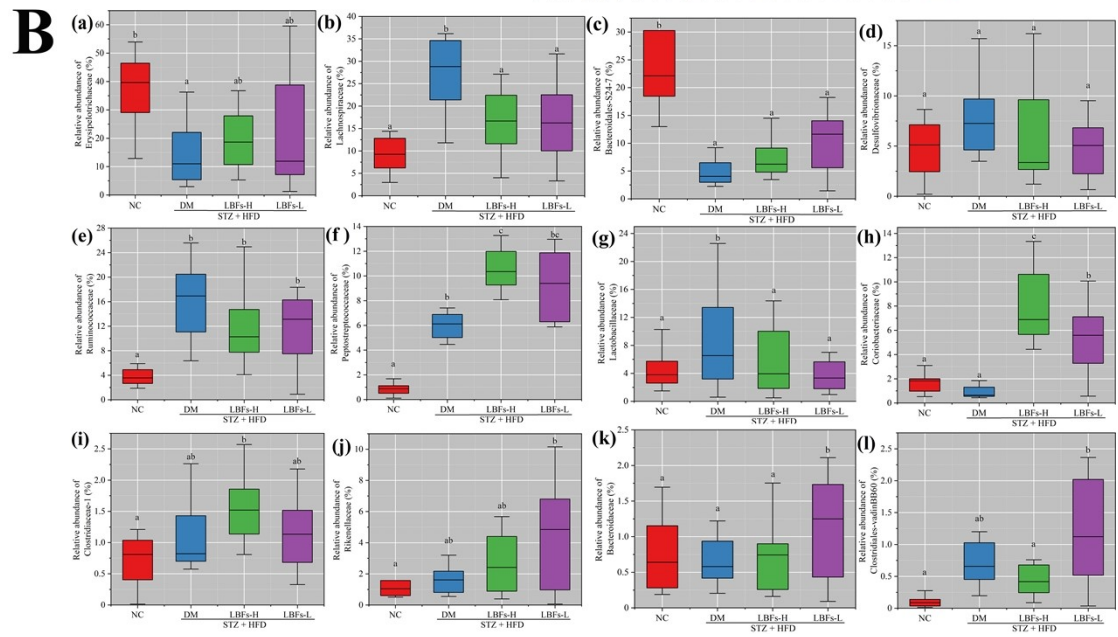
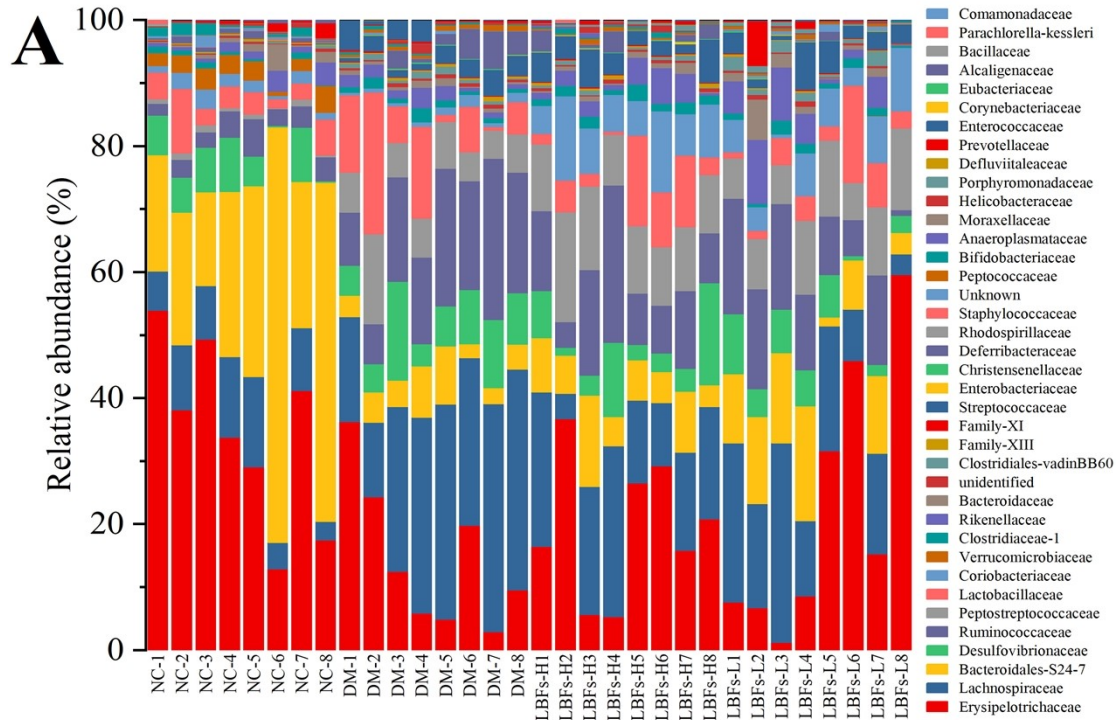


Fig. S3. Bacterial taxonomic profiling at the family level of gut microbiota. (A) bacterial taxonomic profiling at the family level of gut microbiota; (B) comparative analysis of 12 most relative abundance of gut microbiota at the family level. a-d represent significant differences among different groups by one-way ANOVA procedure followed by Tukey's HSD test ($p < 0.05$).