Supplementary material

Fig. S1 Short-chain fatty acids standard chromatograms

Fig. S2 Heatmap of the mice gut microbiota in species level

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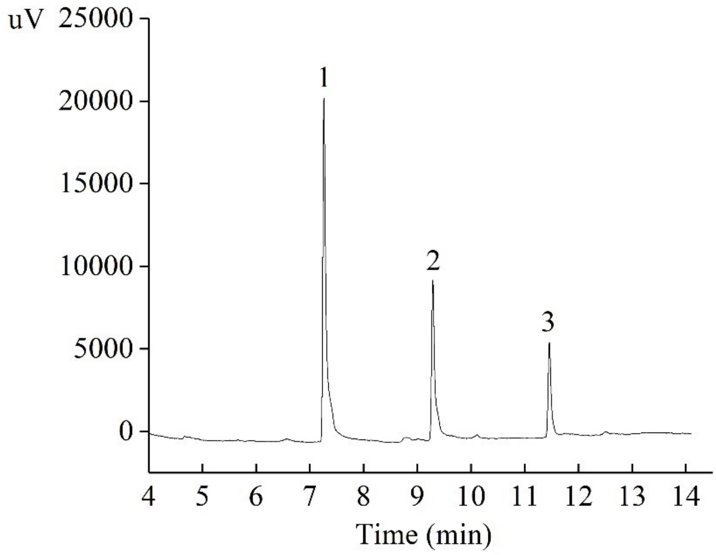

Fig. S1 Short-chain fatty acids standard chromatograms

1: Acetic acid, 7.201 min; 2: Propionic acid, 9.217 min, 3: Butyric acid, 11.392 min. Fecal short-chain fatty acids were measured using 2010 plus gas chromatography equipped with a flame ionization detector (FID) and a Nukol capillaries column (30 m × 0.32 mm × 0.25 μm). The temperature of injection port and detector were 220 °C and 250 ℃. The initial oven temperature was 60 ℃, then increased to 190 °C at a rate of 20 °C/min and maintained for 3 min. Split ratio was 20:1. The nitrogen, hydrogen and air were used as carrier gas at a flow rate of 75 mL/min, 70 mL/min and 50 mL/min. The injection volume was 1 μL.

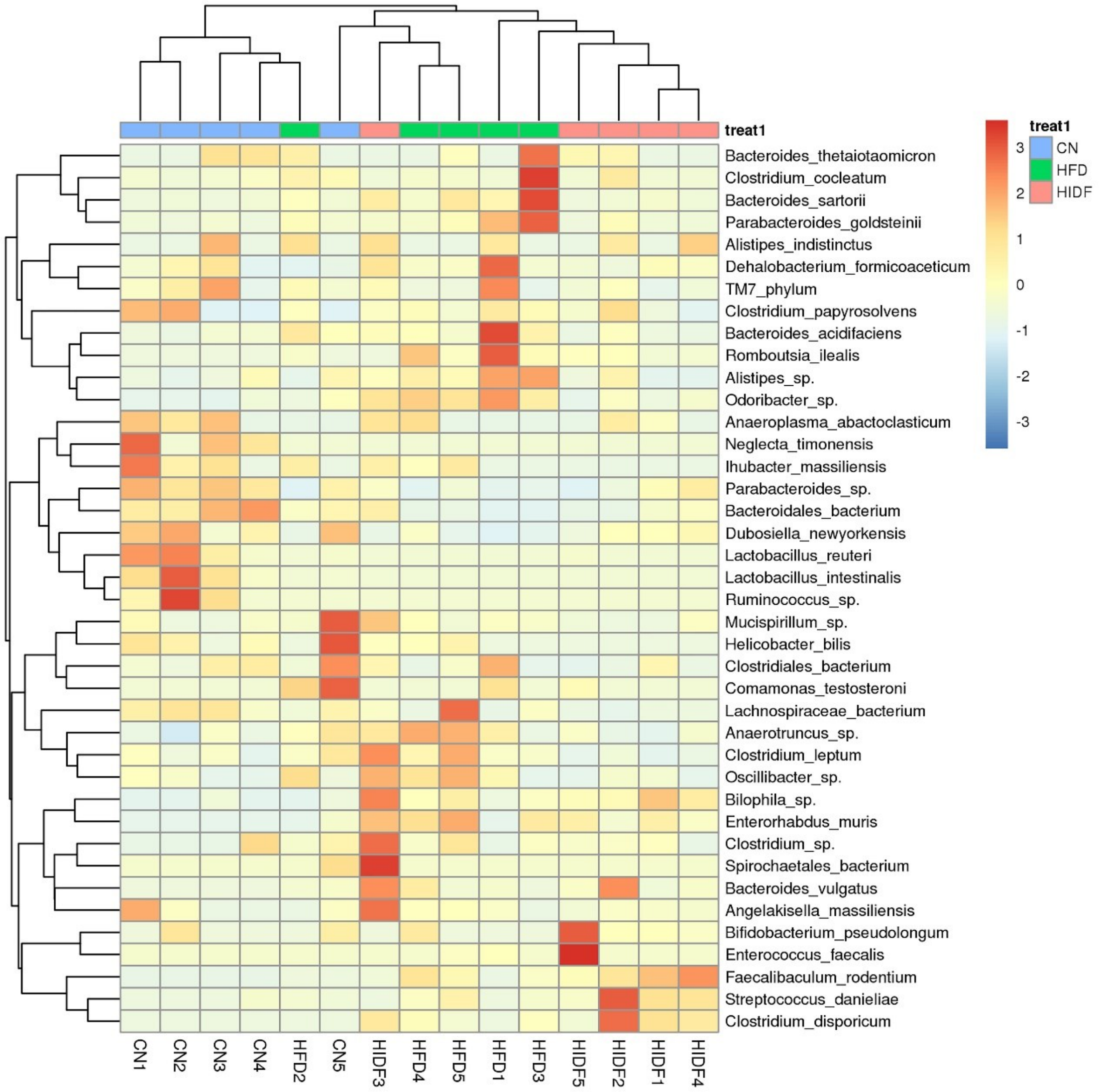

Fig. S2 Heatmap of the mice gut microbiota in species level

CN: Control, HFD: High-fat diet, HIDF: High-does insoluble dietary fiber.

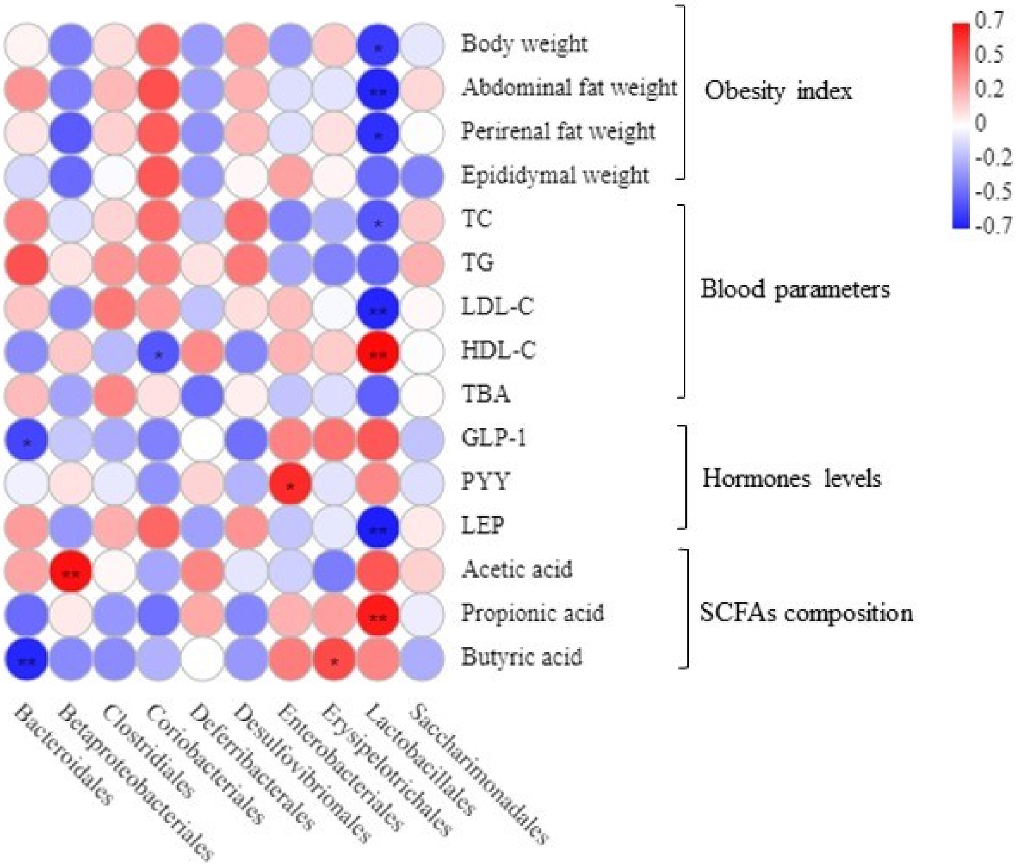

Fig. S3 Correlation analysis at order classification level

$^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$.

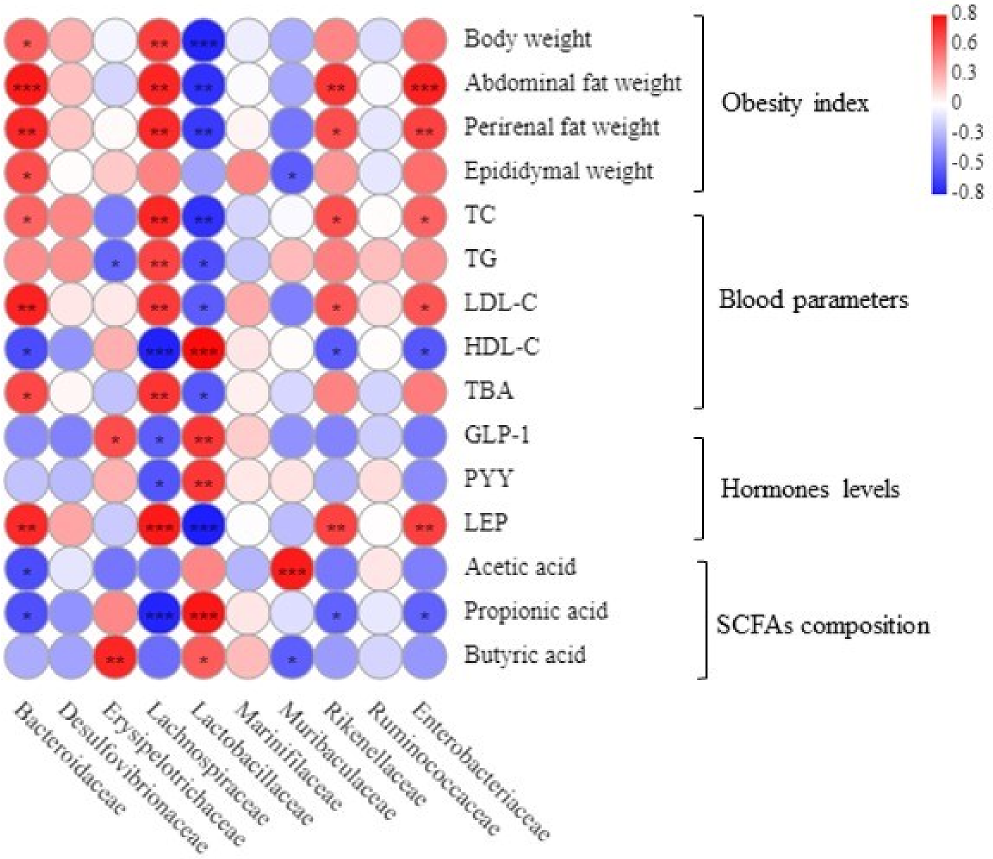

Fig. S4 Correlation analysis at family classification level
$^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$.

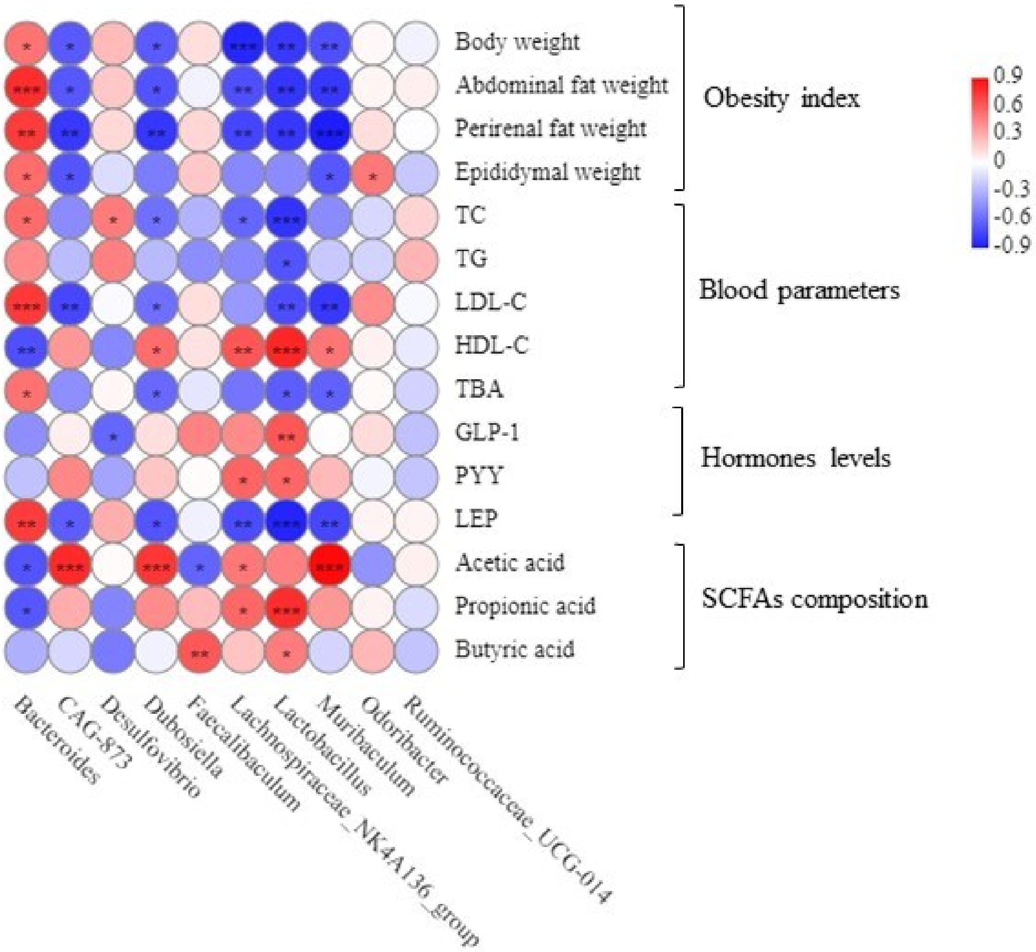

Fig. S5 Correlation analysis at genus classification level

$^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$.

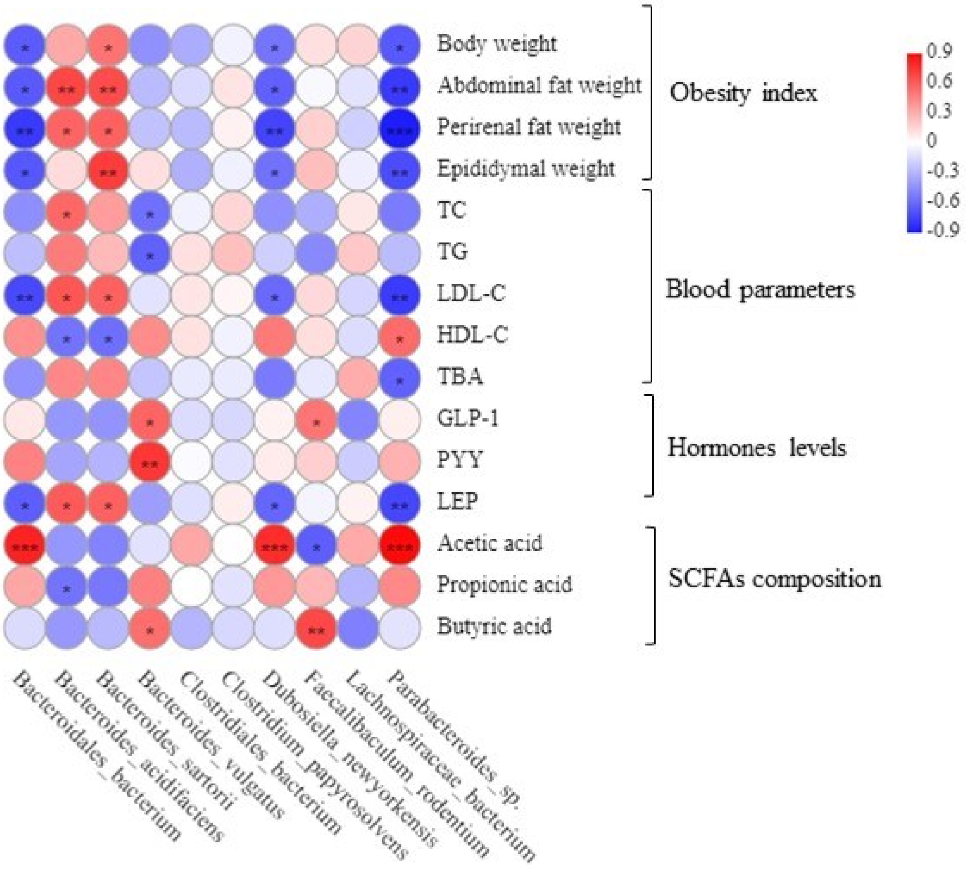

Fig. S6 Correlation analysis at species classification level
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.