

1 **Modulation of gut microbiota by berberine and metformin during the treatment of high-fat**
2 **diet-induced obesity in rats**

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2 **Supplementary Tables**

3 **Table S1** Relative abundance and taxonomy of the 134 key OTUs identified by nearest shrunken
4 centroids analysis.

5 **Table S2** Relative abundance of the 46 significant OTUs from the genus of *Allobaculum*.

6 **Table S3** Taxon-based comparisons of the gut microbiota structure among treatment groups.

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Supplementary Figure Legends

Figure S1 Effects of berberine and metformin on the overall food intake of HFD-fed rats. The overall food intakes for each group (n=3) were calculated as the sum during the treatment period. Values are expressed as means \pm standard error. Differences were assessed by ANOVA and denoted as follows: * P<0.05; ** P<0.01.

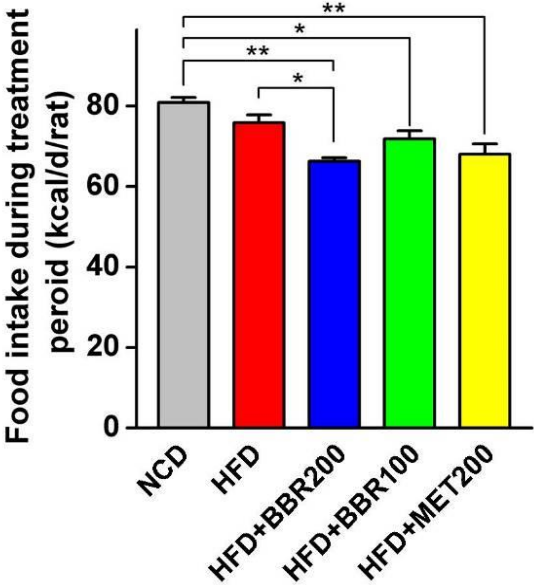
Figure S2 Relative abundance of highly enriched OTUs by both berberine and metformin. Values are expressed as means \pm standard error. Differences were assessed by ANOVA and denoted as follows: * P<0.05; ** P<0.01.

Figure S3 Scatter plots of the true and predicted body weight and adiposity index. PLS regression was used for the prediction of body weight (a, b) and adiposity index (c, d) with either the whole microbiota structure (a, c) or the identified 134 key OTUs (b, d). The Pearson's coefficient R or Spearman's correlation R was indicated.

Figure S4 The abundance ratio of Firmicutes-to-Bacteroidetes in the gut of rats. The median (central thick lines), 25% and 75% quartile ranges (box width), and upper and lower limits (error bar) of each group are shown in the box plot. Data was also shown as squares besides the box plot. Differences were assessed by the Mann-Whitney test, * P<0.05, ** P<0.01.

Figure S5 Scatter plot of fecal Firmicutes-to-Bacteroidetes ratio and bodyweight (a) and adiposity index (b). Spearman's correlation coefficient R and P values are indicated.

1 **Figure S1**



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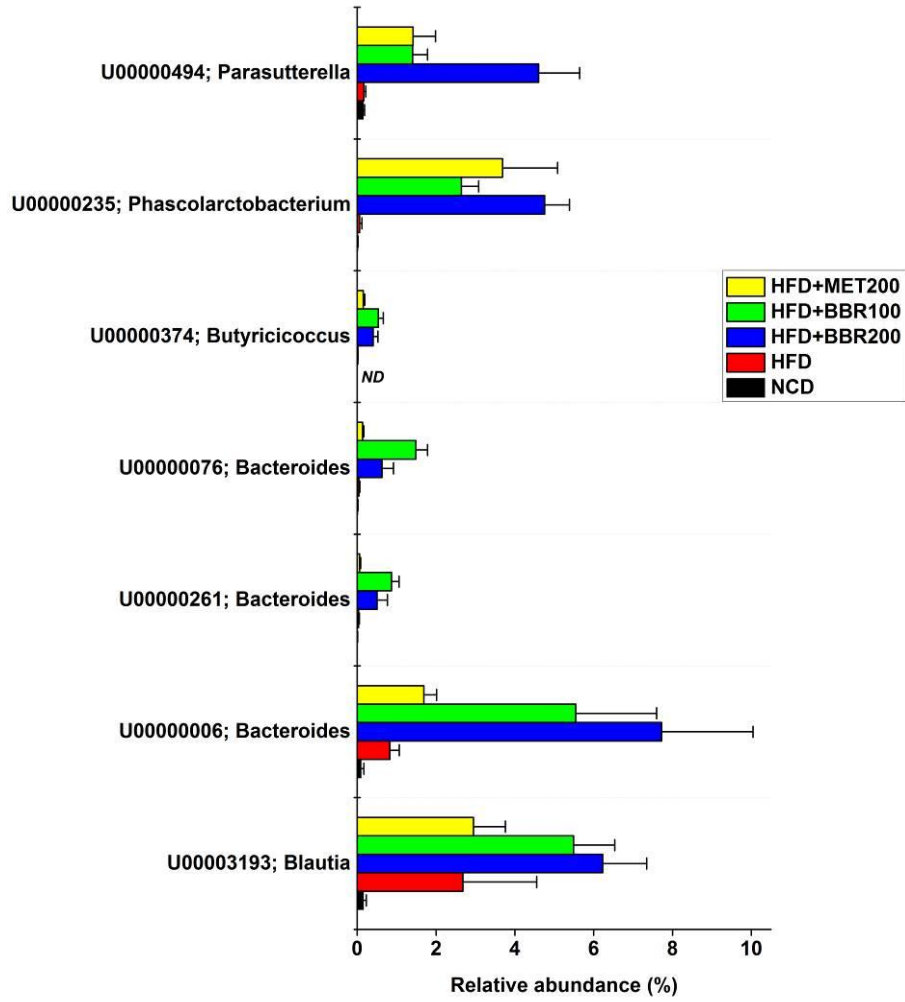
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2 **Figure S2**

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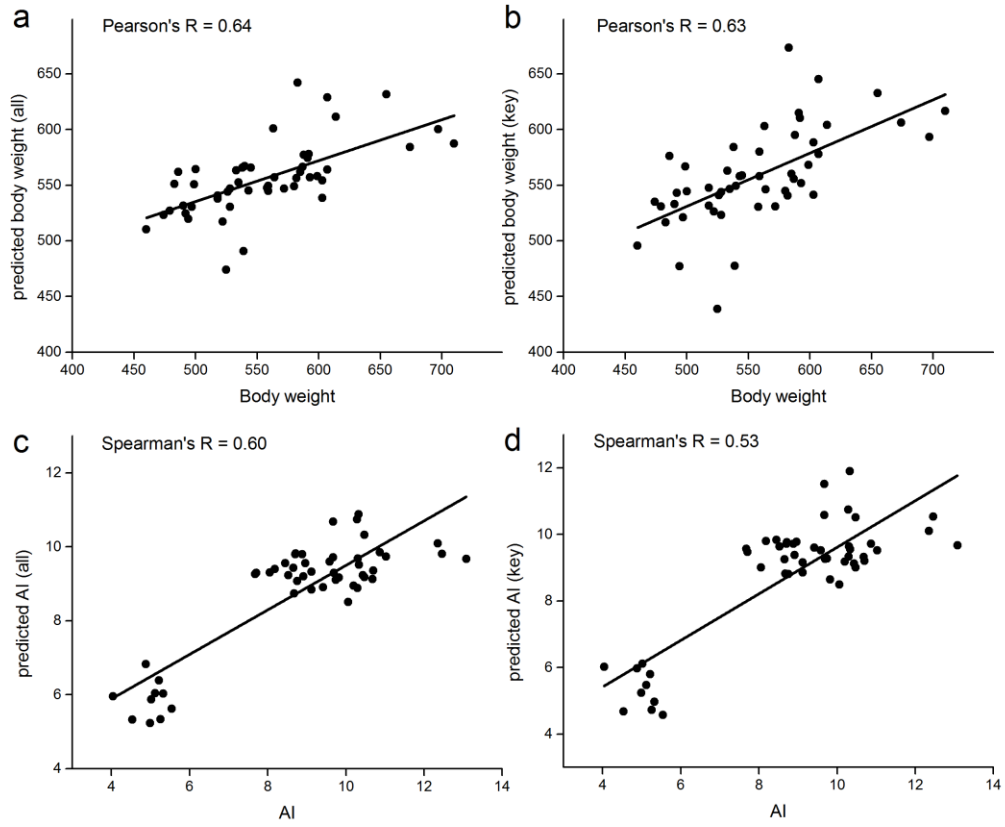


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2 **Figure S3**



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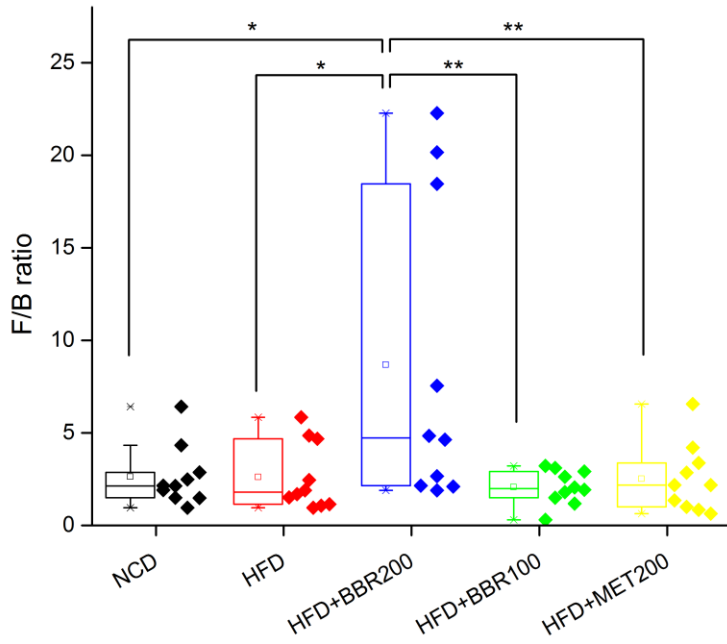
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2 **Figure S4**

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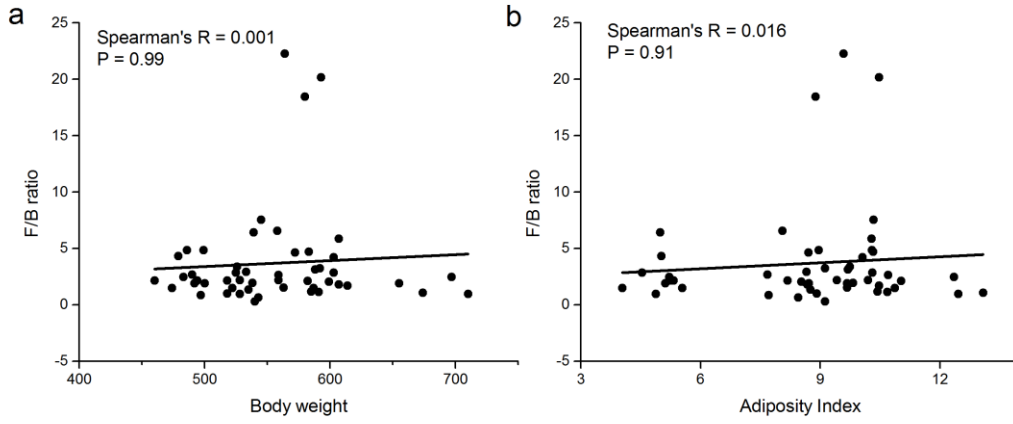
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2 **Figure S5**

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