

Supplementary Table 6. Differential taxa in the gut microbiome between HFD fed rats and controls^a

Taxa ^b	Control (%) ^c	HFD (%) ^d	SD (control) ^e	SD (HFD) ^f	P value ^g	FDR ^h
p__Actinobacteria	4.029778902	0.3484431	2.412013301	0.18069445	0.00216	0.008
p__Actinobacteria;c__Actinobacteria	3.665722584	0.1226354	2.222434776	0.08057401	0.00216	0.015
p__Actinobacteria;c__Actinobacteria;o__Actinomycetales	3.30E-03	0.1039172	3.22E-03	0.08145077	0.00433	0.019
p__Actinobacteria;c__Actinobacteria;o__Actinomycetales;f__Corynebacteriaceae	0	2.90E-03	0	1.66E-03	0.00278	0.02
p__Actinobacteria;c__Actinobacteria;o__Actinomycetales;f__Corynebacteriaceae;g__Corynebacterium	0	2.90E-03	0	1.66E-03	0.00278	0.022
p__Actinobacteria;c__Actinobacteria;o__Actinomycetales;f__Micrococcaceae	3.30E-03	0.1010146	3.22E-03	0.08042155	0.00433	0.02
p__Actinobacteria;c__Actinobacteria;o__Actinomycetales;f__Micrococcaceae;g__Rothia	3.30E-03	0.1010146	3.22E-03	0.08042155	0.00433	0.022
p__Actinobacteria;c__Actinobacteria;o__Bifidobacteriales	3.662426587	0.0187181	2.223961236	0.04305751	0.005	0.019
p__Actinobacteria;c__Actinobacteria;o__Bifidobacteriales;f__Bifidobacteriaceae	3.662426587	0.0187181	2.223961236	0.04305751	0.005	0.02
p__Actinobacteria;c__Actinobacteria;o__Bifidobacteriales;f__Bifidobacteriaceae;g__Bifidobacterium	3.662426587	0.0187181	2.223961236	0.04305751	0.005	0.023
p__Actinobacteria;c__Coriobacteriia;o__Coriobacteriales;f__Coriobacteriaceae;g__	0.079428326	2.09E-03	0.073136173	1.45E-03	0.00216	0.022
p__Bacteroidetes;c__Bacteroidia;o__Bacteroidales;f__[Odoribacteraceae];g__Odoribacter	0	0.0724992	0	0.0573085	0.00278	0.022
p__Bacteroidetes;c__Bacteroidia;o__Bacteroidales;f__Bacteroidaceae	1.124305572	6.4851276	0.43558414	4.75443102	0.00866	0.03
p__Bacteroidetes;c__Bacteroidia;o__Bacteroidales;f__Bacteroidaceae;g__Bacteroides	1.124305572	6.4851276	0.43558414	4.75443102	0.00866	0.033
p__Bacteroidetes;c__Bacteroidia;o__Bacteroidales;f__Rikenellaceae;g__AF12	0	0.0407839	0	0.03582782	0.00962	0.033
p__Bacteroidetes;c__Bacteroidia;o__Bacteroidales;f__Rikenellaceae;g__Alistipes	0.02800352	0.0573831	7.15E-03	0.0381522	0.01515	0.044
p__Bacteroidetes;c__Bacteroidia;o__Bacteroidales;f__S24-7	7.821278606	1.8445615	1.607441647	0.98151079	0.00216	0.02
p__Bacteroidetes;c__Bacteroidia;o__Bacteroidales;f__S24-7;g__	7.821278606	1.8445615	1.607441647	0.98151079	0.00216	0.022
p__Deferribacteres	0	0.1401949	0	0.10336137	0.00278	0.008
p__Deferribacteres;c__Deferribacteres	0	0.1401949	0	0.10336137	0.00278	0.015
p__Deferribacteres;c__Deferribacteres;o__Deferribacterales	0	0.1401949	0	0.10336137	0.00278	0.019
p__Deferribacteres;c__Deferribacteres;o__Deferribacterales;f__Deferribacteraceae	0	0.1401949	0	0.10336137	0.00278	0.02
p__Deferribacteres;c__Deferribacteres;o__Deferribacterales;f__Deferribacteraceae;g__Mucispirillum	0	0.1401949	0	0.10336137	0.00278	0.022
p__Firmicutes;c__Bacilli	17.47981426	3.5316271	6.501191468	6.83021191	0.01515	0.048
p__Firmicutes;c__Bacilli;o__Bacillales;f__Bacillaceae	2.29E-03	0	1.42E-03	0	0.00962	0.03
p__Firmicutes;c__Bacilli;o__Bacillales;f__Bacillaceae;Other	2.29E-03	0	1.42E-03	0	0.00962	0.033
p__Firmicutes;c__Bacilli;o__Lactobacillales;f__Aerococcaceae	6.66E-04	0.0115024	1.04E-03	7.39E-03	0.00434	0.02
p__Firmicutes;c__Bacilli;o__Lactobacillales;f__Aerococcaceae;g__Facklamia	6.66E-04	0.0115024	1.04E-03	7.39E-03	0.00434	0.022
p__Firmicutes;c__Bacilli;o__Lactobacillales;f__Enterococcaceae	1.13E-03	6.97E-03	1.37E-03	4.25E-03	0.01291	0.039
p__Firmicutes;c__Bacilli;o__Lactobacillales;f__Enterococcaceae;g__Enterococcus	1.13E-03	6.97E-03	1.37E-03	4.25E-03	0.01291	0.042
p__Firmicutes;c__Bacilli;o__Lactobacillales;f__Lactobacillaceae;Other	0.323285979	0.0184738	0.116648939	0.03227513	0.005	0.023
p__Firmicutes;c__Bacilli;o__Lactobacillales;f__Streptococcaceae	0.044953138	0.1935069	0.064213032	0.11350143	0.01515	0.043
p__Firmicutes;c__Bacilli;o__Lactobacillales;f__Streptococcaceae;g__Streptococcus	0.023636544	0.158998	0.026170316	0.10667991	0.01515	0.044
p__Firmicutes;c__Bacilli;o__Lactobacillales;Other	0.154968687	7.65E-03	0.072441346	0.01499157	0.00433	0.02
p__Firmicutes;c__Bacilli;o__Lactobacillales;Other;Other	0.154968687	7.65E-03	0.072441346	0.01499157	0.00433	0.022
p__Firmicutes;c__Bacilli;o__Turicibacterales	4.994804053	0.1178966	2.798551225	0.06647922	0.00216	0.019
p__Firmicutes;c__Bacilli;o__Turicibacterales;f__Turicibacteraceae	4.994804053	0.1178966	2.798551225	0.06647922	0.00216	0.02
p__Firmicutes;c__Bacilli;o__Turicibacterales;f__Turicibacteraceae;g__Turicibacter	4.994804053	0.1178966	2.798551225	0.06647922	0.00216	0.022

p__Firmicutes;c__Bacilli;Other	0.324073188	9.15E-03	0.157308671	0.01960309	0.00477	0.019
p__Firmicutes;c__Bacilli;Other;Other	0.324073188	9.15E-03	0.157308671	0.01960309	0.00477	0.02
p__Firmicutes;c__Bacilli;Other;Other;Other	0.324073188	9.15E-03	0.157308671	0.01960309	0.00477	0.023
p__Firmicutes;c__Clostridia;o__Clostridiales;f__Christensenellaceae	0.018218227	0.3909521	0.011258285	0.39967209	0.00216	0.02
p__Firmicutes;c__Clostridia;o__Clostridiales;f__Christensenellaceae;g__	0.018218227	0.389203	0.011258285	0.39940752	0.00216	0.022
p__Firmicutes;c__Clostridia;o__Clostridiales;f__Clostridiaceae;g__Clostridium	0.630691462	0.2369333	0.204960357	0.14035892	0.00433	0.022
p__Firmicutes;c__Clostridia;o__Clostridiales;f__Dehalobacteriaceae	0.056302768	0.1722881	0.034714207	0.08276419	0.00866	0.03
p__Firmicutes;c__Clostridia;o__Clostridiales;f__Dehalobacteriaceae;g__Dehalobacterium	0.056302768	0.1722881	0.034714207	0.08276419	0.00866	0.033
p__Firmicutes;c__Clostridia;o__Clostridiales;f__Lachnospiraceae;g__Anaerostipes	0.020361012	1.07E-03	0.014501235	1.68E-03	0.00434	0.022
p__Firmicutes;c__Clostridia;o__Clostridiales;f__Lachnospiraceae;g__Blautia	0.021973444	0.7060149	0.047345874	0.63162652	0.01152	0.038
p__Firmicutes;c__Clostridia;o__Clostridiales;f__Lachnospiraceae;g__Clostridium	0.04538691	0	0.048416056	0	0.00962	0.033
p__Firmicutes;c__Clostridia;o__Clostridiales;f__Peptococcaceae	0.282804404	2.5338338	0.145573425	2.0048704	0.00433	0.02
p__Firmicutes;c__Clostridia;o__Clostridiales;f__Peptococcaceae;g__rc4-4	0.241020183	1.23565	0.160168574	1.40019644	0.01515	0.044
p__Firmicutes;c__Clostridia;o__Clostridiales;f__Ruminococcaceae;g__Anaerotruncus	5.98E-03	0.0347436	2.87E-03	0.01798264	0.00216	0.022
p__Firmicutes;c__Clostridia;o__Clostridiales;f__Ruminococcaceae;g__Butyricicoccus	0.164552074	5.54E-04	0.0796705	9.02E-04	0.00434	0.022
p__Firmicutes;c__Clostridia;o__Clostridiales;f__Ruminococcaceae;g__Clostridium	0	2.19E-03	0	1.59E-03	0.00962	0.033
p__Firmicutes;c__Clostridia;o__Clostridiales;f__Ruminococcaceae;g__Oscillospira	4.524759919	9.9619908	2.478863413	3.82110116	0.01515	0.044
p__Firmicutes;c__Erysipelotrichi;o__Erysipelotrichales;f__Erysipelotrichaceae;g__Clostridium	0	0.0830312	0	0.04904153	0.00278	0.022
p__Firmicutes;c__Erysipelotrichi;o__Erysipelotrichales;f__Erysipelotrichaceae;g__Coprobacillus	0	0.0252972	0	0.03144246	0.00962	0.033
p__Firmicutes;Other	0.815320052	0.1435231	0.266351889	0.21627993	0.00433	0.019
p__Firmicutes;Other;Other	0.815320052	0.1435231	0.266351889	0.21627993	0.00433	0.019
p__Firmicutes;Other;Other;Other	0.815320052	0.1435231	0.266351889	0.21627993	0.00433	0.02
p__Firmicutes;Other;Other;Other;Other	0.815320052	0.1435231	0.266351889	0.21627993	0.00433	0.022
p__Proteobacteria	0.336951146	1.6402371	0.166955946	0.76254071	0.00216	0.008
p__Proteobacteria;c__Alphaproteobacteria;o__Caulobacterales	0	2.09E-03	0	1.25E-03	0.00278	0.019
p__Proteobacteria;c__Alphaproteobacteria;o__Caulobacterales;f__Caulobacteraceae	0	2.09E-03	0	1.25E-03	0.00278	0.02
p__Proteobacteria;c__Deltaproteobacteria	0.084824713	1.1225817	0.035997123	0.5392137	0.00216	0.015
p__Proteobacteria;c__Deltaproteobacteria;o__Desulfovibrionales	0.084824713	1.1213819	0.035997123	0.53819368	0.00216	0.019
p__Proteobacteria;c__Deltaproteobacteria;o__Desulfovibrionales;f__Desulfovibrionaceae	0.078739657	1.0632701	0.034198833	0.5153079	0.00216	0.02
p__Proteobacteria;c__Deltaproteobacteria;o__Desulfovibrionales;f__Desulfovibrionaceae;g__	0.066107278	0.5151498	0.027528972	0.28295205	0.00216	0.022
p__Proteobacteria;c__Deltaproteobacteria;o__Desulfovibrionales;f__Desulfovibrionaceae;g__Bilophila	0	0.3608243	0	0.23864018	0.00278	0.022
p__Proteobacteria;c__Deltaproteobacteria;o__Desulfovibrionales;f__Desulfovibrionaceae;g__Desulfovibrio	0.01263238	0.1611189	0.010611456	0.06009563	0.00216	0.022
p__Proteobacteria;c__Deltaproteobacteria;o__Desulfovibrionales;f__Desulfovibrionaceae;Other	0	0.0261771	0	0.02164655	0.00278	0.022
p__Proteobacteria;c__Deltaproteobacteria;o__Desulfovibrionales;Other	6.09E-03	0.0581118	2.89E-03	0.02710348	0.00216	0.02
p__Proteobacteria;c__Deltaproteobacteria;o__Desulfovibrionales;Other;Other	6.09E-03	0.0581118	2.89E-03	0.02710348	0.00216	0.022
p__Proteobacteria;Other	0	3.28E-03	0	2.06E-03	0.00962	0.035
p__Proteobacteria;Other;Other	0	3.28E-03	0	2.06E-03	0.00962	0.033
p__Proteobacteria;Other;Other;Other	0	3.28E-03	0	2.06E-03	0.00962	0.03
p__Proteobacteria;Other;Other;Other;Other	0	3.28E-03	0	2.06E-03	0.00962	0.033
p__Tenericutes	0.11308136	0.8627701	0.057036266	0.43285286	0.00216	0.008
p__Tenericutes;c__Mollicutes	0.11308136	0.8614017	0.057036266	0.43127912	0.00216	0.015
p__Tenericutes;c__Mollicutes;o__Anaeroplasmatales	0.028497408	0.5637793	0.035707217	0.3622443	0.00433	0.019

p__Tenericutes;c__Mollicutes;o__Anaeroplasmatales;f__Anaeroplasmataceae	0.028497408	0.5637793	0.035707217	0.3622443	0.00433	0.02
p__Tenericutes;c__Mollicutes;o__Anaeroplasmatales;f__Anaeroplasmataceae;g__Anaeroplasma	0.028497408	0.562291	0.035707217	0.3608432	0.00433	0.022
p__TM7	3.37E-03	0.0159886	3.81E-03	0.0122354	0.02002	0.044

FDR, False discovery rate; SD, standard deviation.

^a Rats were fed with HFD or standard chow for 16 weeks.

^b Taxa that are differentially represented between HFD fed rats and controls.

^c Average abundance in control rats .

^d Average abundance in HFD fed rats.

^e Standard Deviation of the taxa in control rats .

^f Standard Deviation of taxa in HFD fed rats.

^g Wilcox test.

^h FDR adjusted P values. FDR less than 0.05 were considered significantly different.