

Table S3. Taxonomic ranks of each bacterial identified in the HFD and HFD NE groups

TAXA ABBREVIATION	TAXA ID
f_Ruminococcaceae	k_Bacteria;p_Firmicutes;c_Clostridia;o_Clostridiales;f_Ruminococcaceae
g_Oscillospira	k_Bacteria;p_Firmicutes;c_Clostridia;o_Clostridiales;f_Ruminococcaceae; g_Oscillospira
g_Ruminococcus	k_Bacteria;p_Firmicutes;c_Clostridia;o_Clostridiales;f_Ruminococcaceae; g_Ruminococcus
p_Verrucomicrobia	k_Bacteria;p_Verrucomicrobia
o_Verrucomicrobiales	k_Bacteria;p_Verrucomicrobia;c_Verrucomicrobiae;o_Verrucomicrobiales
c_Verrucomicrobiae	k_Bacteria;p_Verrucomicrobia;c_Verrucomicrobiae
f_Verrucomicrobiaceae	k_Bacteria;p_Verrucomicrobia;c_Verrucomicrobiae;o_Verrucomicrobiales; f_Verrucomicrobiaceae
g_Akkermansia	k_Bacteria;p_Verrucomicrobia;c_Verrucomicrobiae;o_Verrucomicrobiales; f_Verrucomicrobiaceae;g_Akkermansia
s_muciniphila	k_Bacteria;p_Verrucomicrobia;c_Verrucomicrobiae;o_Verrucomicrobiales; f_Verrucomicrobiaceae;g_Akkermansia;s_muciniphila
c_Sva0725	k_Bacteria;p_Acidobacteria;c_Sva0725
o_Sva0725	k_Bacteria;p_Acidobacteria;c_Sva0725;o_Sva0725
g_Syntrophococcus	k_Bacteria;p_Firmicutes;c_Clostridia;o_Clostridiales;f_Lachnospiraceae;g_Syntrophococcus
s_sucromutans	k_Bacteria;p_Firmicutes;c_Clostridia;o_Clostridiales;f_Lachnospiraceae;g_Syntrophococcus;s_sucromutans
f_Christensenellaceae	k_Bacteria;p_Firmicutes;c_Clostridia;o_Clostridiales;f_Christensenellaceae
g_Alkaliphilus	k_Bacteria;p_Firmicutes;c_Clostridia;o_Clostridiales; f_Clostridiaceae;g_Alkaliphilus
g_Fusibacter	k_Bacteria;p_Firmicutes;c_Clostridia;o_Clostridiales; f_Acidaminobacteraceae;g_Fusibacter
s_reuteri	k_Bacteria;p_Firmicutes;c_Bacilli;o_Lactobacillales;f_Lactobacillaceae; g_Lactobacillus;s_reuteri
g_Odoribacter	k_Bacteria;p_Bacteroidetes;c_Bacteroidia;o_Bacteroidales; f_Odoribacteraceae;g_Odoribacter
g_SMB53	k_Bacteria;p_Firmicutes;c_Clostridia;o_Clostridiales; f_Clostridiaceae;g_SMB53
f_Clostridiaceae	k_Bacteria;p_Firmicutes;c_Clostridia;o_Clostridiales;f_Clostridiaceae

p_: Phylum; c_: Class; o_Order; f_:Family; g_Genus; s_Specie

Experimental groups: mice fed with a high fat diet for 12 weeks in standard housing conditions (HFD); mice fed for 24 weeks with a high fat diet and maintained in standard housing conditions (HFD NE).