

Table 1. Significant effects of diet and exercise at the level of family.

Family	Main effects 2-way ANOVA			post-hoc testing			
	High fat diet	exercise	interaction	ND vs HFD	ND+ex vs HFD+ex	ND vs ND+ex	HFD vs HFD+ex
Porphyromonadaceae	↓ ****	↓ ***		****	****	*	*
Streptococcaceae	↑ ****	↓ **	*	****	**		**
Lachnospiraceae	↑ ****	↑ *		****	****		
Erysipelotrichaceae	↓ ****			**	***		
Clostridiaceae_1	↑ ****			**	****	*	
Ruminococcaceae	↑ ****				***		
Peptostreptococcaceae	↑ ***	↑ ***	**		***		***
Eubacteriaceae	↑ ***		*		**		
Peptococcaceae_1	↓ **	↓ **	**	**		**	
Anaeroplasmataceae	↓ **		*	**		*	
Staphylococcaceae	↓ **						
Cryomorphaceae	↑ *	↑ **	*		**	**	
Phyllobacteriaceae	↑ *	↑ *			*		*
Alcaligenaceae	↑ *	↑ *					
Pseudomonadaceae	↑ *	↑ *			*		*
Bacteroidaceae	↑ *			*			
Veillonellaceae	↑ *						
Enterobacteriaceae	↑ *						
Lactobacillaceae	↑ *						
Gracilibacteraceae	↑ *						
Peptococcaceae_2		↓ ***				*	
Rhizobiaceae		↑ **					
Incertae_Sedis_IV		↑ **				*	
Microbacteriaceae		↑ *					
Nocardiaceae		↑ *					
Coriobacteriaceae		↑ *				*	
Flavobacteriaceae		↑ *					*
Sphingobacteriaceae		↑ *			*		*
Bradyrhizobiaceae		↑ *					
Caulobacteraceae		↑ *					*
Burkholderiaceae		↑ *					*
Comamonadaceae		↑ *					