

**Additional file 8 Mean relative abundance of phylogenetic clusters among Bacteroidetes and Spirochaetae with significant differences between experimental groups.**

Phylum / Class / Order / Family / Genus / OTU	LH1-LH2	C1-LH2	C1-C2	C1-HG2	HG1-HG2	Test	P*
Bacteroidetes (phylum)	3.69 <sup>y</sup> ± 1.24	3.22 <sup>y</sup> ± 1.40	1.89 <sup>z</sup> ± 1.63	1.09 <sup>yz</sup> ± 0.56	1.63 <sup>yz</sup> ± 1.02	LEfSe	0.006
Bacteroidetes / Flavobacteriia / Flavobacteriales	2.87 <sup>y</sup> ± 0.86	3.21 <sup>y</sup> ± 1.40	1.77 <sup>z</sup> ± 1.64	1.02 <sup>yz</sup> ± 0.57	1.43 <sup>y</sup> ± 1.02	LEfSe	0.027
Bacteroidetes / Flavobacteriia / Flavobacteriales / Flavobacteriaceae	2.86 <sup>y</sup> ± 0.86	3.04 <sup>yz</sup> ± 1.35	1.77 <sup>z</sup> ± 1.64	0.84 <sup>yz</sup> ± 0.42	1.28 <sup>yz</sup> ± 0.89	LEfSe	0.027
Bacteroidetes / Flavobacteriia / Flavobacteriales / Flavobacteriaceae / <i>Tenacibaculum</i>	0.12 <sup>yz</sup> ± 0.12	1.27 <sup>y</sup> ± 1.01	0 <sup>z</sup>	0.16 <sup>yz</sup> ± 0.16	0.19 <sup>yz</sup> ± 0.19	LEfSe	0.010
Bacteroidetes / Flavobacteriia / Flavobacteriales / Flavobacteriaceae / <i>Chryseobacterium</i> / OTU_30	0.925 <sup>y</sup> ± 0.754	0 <sup>z</sup>	0.003 <sup>yz</sup> ± 0.003	0.222 <sup>yz</sup> ± 0.222	0 <sup>z</sup>	KW	0.046
Bacteroidetes / Flavobacteriia / Flavobacteriales / Flavobacteriaceae / NS5 marine group / OTU_28	0.378 <sup>yz</sup> ± 0.378	0.463 <sup>y</sup> ± 0.367	0 <sup>z</sup>	0.0009 <sup>yz</sup> ± 0.0009	0 <sup>z</sup>	LEfSe	0.047
Bacteroidetes / Flavobacteriia / Flavobacteriales / Flavobacteriaceae / unknown genus / OTU_38	0.0008 <sup>yz</sup> ± 0.0008	0.165 <sup>yz</sup> ± 0.165	0 <sup>z</sup>	0.360 <sup>yz</sup> ± 0.342	0.300 <sup>y</sup> ± 0.200	LEfSe	0.040
Bacteroidetes / Bacteroidia / Bacteroidales / Porphyromonadaceae	0.0062 <sup>yz</sup> ± 0.0055	0.0026 <sup>yz</sup> ± 0.0018	0 <sup>z</sup>	0.0009 <sup>yz</sup> ± 0.0009	0.0036 <sup>y</sup> ± 0.0013	LEfSe	0.019
Spirochaetae / Spirochaetes / Spirochaetales / Spirochaetaceae / <i>Treponema</i> 2	0.0016 <sup>ab</sup> ± 0.0011	0.0009 <sup>ab</sup> ± 0.0009	0.0008 <sup>b</sup> ± 0.0008	0.204 <sup>ab</sup> ± 0.167	0.445 <sup>a</sup> ± 0.371	KW	0.003
Spirochaetae / Spirochaetes / Spirochaetales / Spirochaetaceae / <i>Treponema</i> 2 / OTU_47	0.0008 <sup>b</sup> ± 0.0008	0.0009 <sup>ab</sup> ± 0.0009	0 <sup>b</sup>	0.204 <sup>ab</sup> ± 0.167	0.445 <sup>a</sup> ± 0.371	KW	≤0.001

The differences were compared between all groups, simultaneously (KW: Kruskal-Wallis test), and between pairs after Linear Discriminant Analysis (LDA) Effective Size (LEfSe) comparisons. The mean percentages with a single superscript a or b on the same line corresponded to the significant differences according to the post-hoc pairwise comparisons (Dunn's method). The means with a single superscript y or z on the same line corresponded to significant differences after LEfSe pairwise comparisons (not shown in case of significant difference with KW on the 3 groups); \*in case of LEfSe, only the lowest p among the multiple pairwise comparisons was shown.