Oral intake of the microalgae *Nannochloropsis oceanica, Chlorella vulgaris,* or *Phaeodactylum tircornutum* improves metabolic conditions in hypercaloric-fed mice

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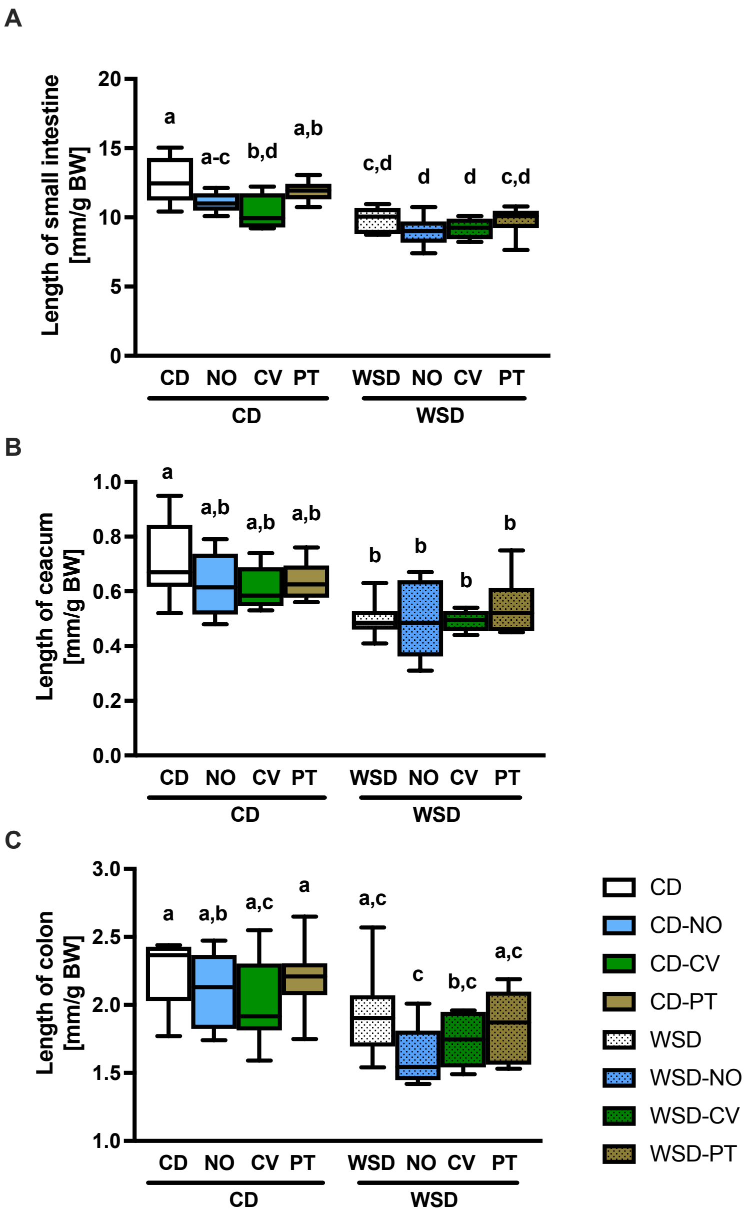
Supplements

Figure S1. Length of the ceacum (A), length of the small intestine (B), length of the colon (C).



Boxplots and Whiskers (25th and 75th percentiles) are shown (n = 8 per group). Different letters indicate significant differences as analysed by ANOVA with Dunnett's post-hoc test. Abbreviations: CD, Control diet; CD-CV, CD + *Chlorella vulgaris*; CD-NO, CD + *Nannochloropsis oceanica*; CD-PT, CD + *Phaeodactylum tricornutum*; WSD, Western-style Diet; WSD-CV, WSD + *Chlorella vulgaris*; WSD-NO, WSD + *Nannochloropsis oceanica*; WSD-PT, WSD + *Phaeodactylum tricornutum*.

Table S1. Alpha diversity measures and relative abundance of bacterial phyla and genera after 69 days of microalgae supplementation.

Diet / Microbial parameters	CD	CD-NO	CD-CV	CD-PT	WSD	WSD-NO	WSD-CV	WSD-PT
n	**8**	**8**	**8**	**8**	**8**	**8**	**8**	**8**
Alpha diversity								
Shannon index	3.5±0.2 ^{a}	3.5±0.2 ^{a}	3.4±0.3 ^{a}	3.6±0.3 ^{a}	3.5±0.3 ^{a}	3.4±0.3 ^{a}	3.2±0.5 ^{a}	3.6±0.1 ^{a}
Observed OTUs	116±8 ^{a,c}	110±4 ^{b}	115±4 $^{a\text{-}c}$	112±6 $^{a\text{-}c}$	116±4 ^{c}	110±6 ^{b}	110±6 ^{b}	111±7 $^{a\text{-}c}$
Phylum								
Bacteroidetes	68±12 ^{a}	67±5 ^{a}	71±7 ^{a}	63±14 ^{a}	70±7 ^{a}	66±10 ^{a}	67±17 ^{a}	63±11 ^{a}
Firmicutes	30±13 $^{a\text{-}c}$	28±8 $^{a\text{-}c}$	27±7 $^{a\text{-}c}$	35±14 ^{a,c}	26±7 $^{a\text{-}c}$	30±12 $^{a\text{-}c}$	28±19 ^{b}	35±12 ^{a,c}
Actinobacteria	1±1 ^{a}	3±4 ^{a}	2±2 ^{a}	2±2 ^{a}	3±5 ^{a}	4±5 ^{a}	2±3 ^{a}	1±1 ^{a}
Genus[1]								
Alistipes	21±9 ^{a,b}	16±7 ^{a,b}	21±6 ^{a}	18±10 ^{a,b}	17±6 ^{a,b}	16±10 ^{b}	19±8 ^{a,b}	18±7 ^{a,b}
Bacteroides	9±6 ^{a}	6±2 ^{a,b}	5±2 ^{a,b}	5±3 ^{a,b}	4±1 ^{b}	7±2 ^{a}	6±4 ^{a,b}	7±5 ^{a,b}
Clostridium IV	1±0 ^{a,b}	1±0 ^{a}	1±0 ^{a,b}	1±0 ^{a,b}	1±0 ^{b}	2±2 ^{a,b}	1±1 ^{a,b}	1±1 ^{a}
Clostridium XIVa	1±1 ^{a,b}	1±1 ^{a,b}	2±1 ^{a,b}	5±9 ^{b}	2±2 ^{b}	2±1 ^{a,b}	1±1 ^{a}	2±1 ^{b}
Flavonifractor	1±1 ^{a}	1±1 ^{a,b}	1±2 ^{a}	1±1 ^{a}	1±1 ^{a}	1±1 ^{a,b}	1±1 ^{a,b}	2±2 ^{b}
Odoribacter	1±1.1	1.6±2.7	1.1±0.7	2±2.6	2.2±1.9	1.5±2.5	1.1±1.6	1.7±1.9
Olsenella	0.7±0.7 ^{a,b}	2.8±4.2 ^{a,b}	1.5±2 ^{a,b}	1.3±1.9 ^{a,b}	2.9±4.7 ^{a}	3.3±5 ^{a,b}	1.4±3.2 ^{a,b}	0.6±0.8 ^{b}
Oscillibacter	3.2±0.6 ^{a,c}	2.9±0.9 $^{a\text{-}c}$	2.9±0.7 $^{a\text{-}c}$	3.4±1 $^{a\text{-}c}$	2.6±0.9 $^{a\text{-}c}$	2.1±0.9 ^{b}	3.1±2 $^{a\text{-}c}$	3.2±1.1 ^{c}
Parabacteroides	9±7 ^{a}	11±9 ^{a}	14±12 ^{a}	10±9 ^{a}	16±11 ^{a}	13±7 ^{a}	21±16 ^{a}	10±5 ^{a}
Pseudoflavonifractor	1±1 ^{a}	1±1 ^{a}	1±0 ^{a}	2±1 ^{a}	1±1 ^{a}	1±1 ^{a}	1±1 ^{a}	1±1 ^{a}

Data shown as mean ± standard deviation. Different letters indicate significant differences as analysed by Kruskal-Wallis tests (non-adjusted individual p values; $p < 0.05$). CD, Control Diet; CV, Control Diet + *Chlorella vulgaris*; NO, Control Diet + *Nannochloropsis oceanica*; OTUs, operational taxonomic units; PT, Control Diet + *Phaeodactylum tricornutum*; WSD, Western Style Diet; W-CV, Western Style Diet + *Chlorella vulgaris*; W-NO, Western Style Diet + *Nannochloropsis oceanica*; W-PT, Western Style Diet + *Phaeodactylum tricornutum*. [1]To omit assessing spurious data, we only included genera with a mean relative abundance greater than 1%.