

Supplementary data

Supplementary Table 1: Evolution of diet during the intervention.

Supplementary Figure 1: Characteristics of the individuals from the Resistant Dextrin (RD) group.

Supplementary Figure 2: Presence/absence of genes from Parabacteroides distasonis in the individuals from the RD group.

Supplementary Figure 3: Profiles of susD and susC.

Supplementary Figure 4: P. distasonis log-fold change comparison.

Supplementary Table 1: Evolution of diet during the intervention.

	RD ^a (baseline)	CP ^b (baseline)	RD (D42)	CP (D42)	RD log fold-change	CP log fold-change	P ^c	Q ^d
Energy ± SD (kcal/d)	1800 ± 440	1800 ± 440	1900 ± 550	1800 ± 610	0.01	-0.028	0.47	1
Carbohydrates ± SD (g/d)	200 ± 70	210 ± 68	200 ± 86	210 ± 89	-0.059	-0.069	0.82	1
Proteins ± SD (g/d)	76 ± 18	79 ± 20	80 ± 22	79 ± 29	0.05	-0.052	0.34	1
Lipids ± SD (g/d)	80 ± 19	74 ± 19	82 ± 31	76 ± 29	-0.0064	-0.023	0.62	1
Percentage of energy from alcohol ± SD (%)	1.3 ± 2.6	1.2 ± 2	2.2 ± 4	1.4 ± 2.8	NaN	NaN	0.18	1
Water ± SD (ml/d)	3500 ± 670	4100 ± 1100	3800 ± 650	4000 ± 810	0.12	-0.021	0.21	1
Fiber ± SD (g/d)	15 ± 7.3	19 ± 9.4	18 ± 8.2	16 ± 9.5	0.28	-0.26	0.00039	0.0027

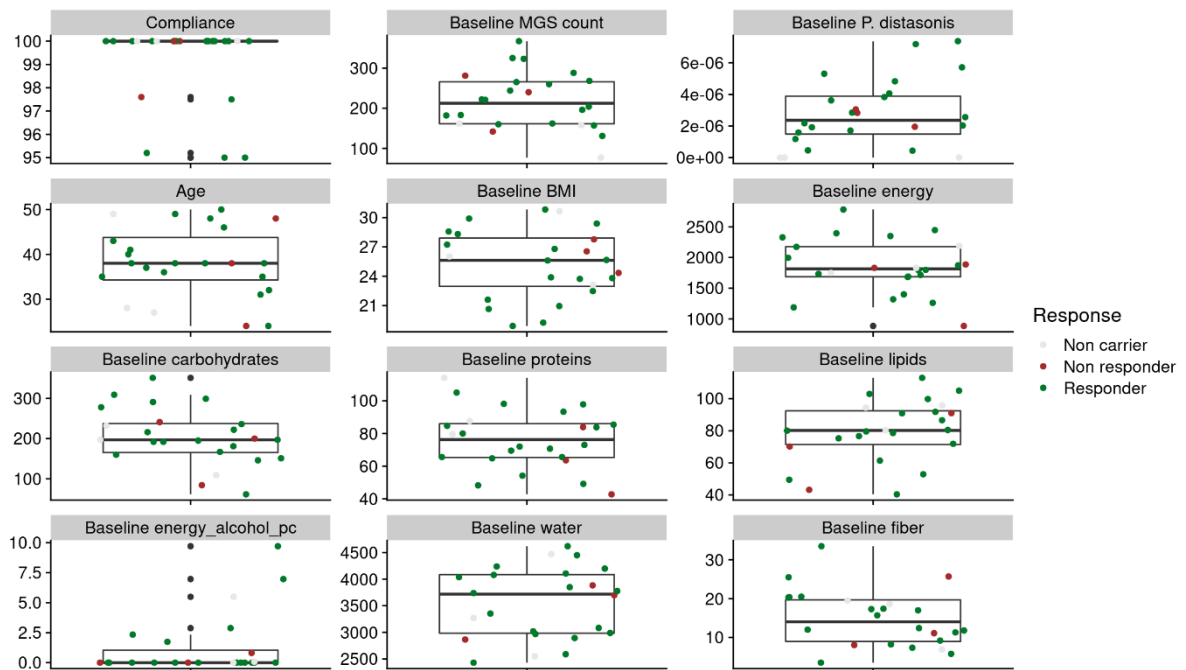
a) RD = Resistant Dextrin

b) CP = Control Product

d) P-value associated with the non-parametric longitudinal data test.

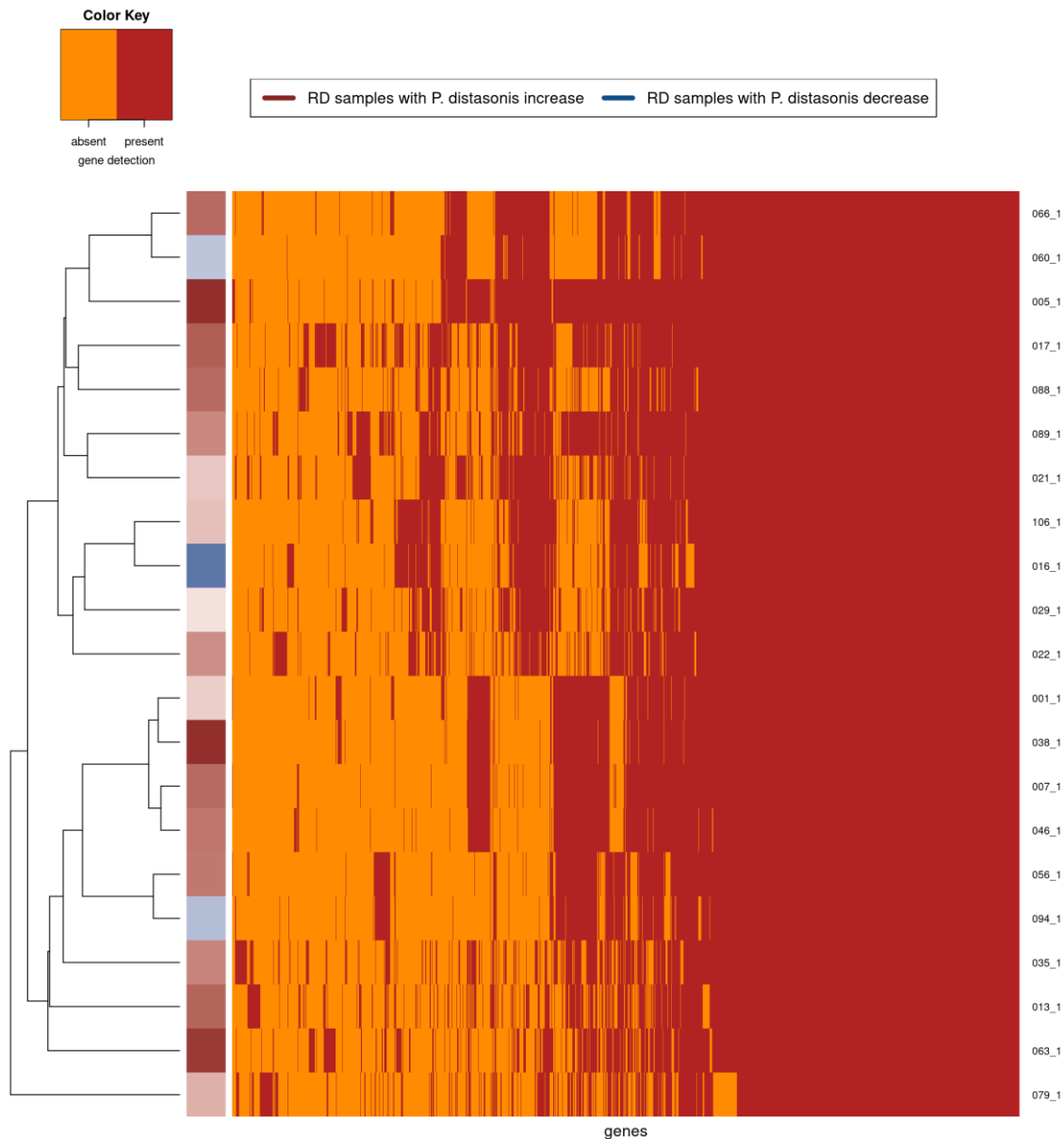
e) P-value corrected for multiple testing with the Benjamini-Hochberg procedure.

Supplementary Figure 1: Characteristics of the individuals from the RD group.



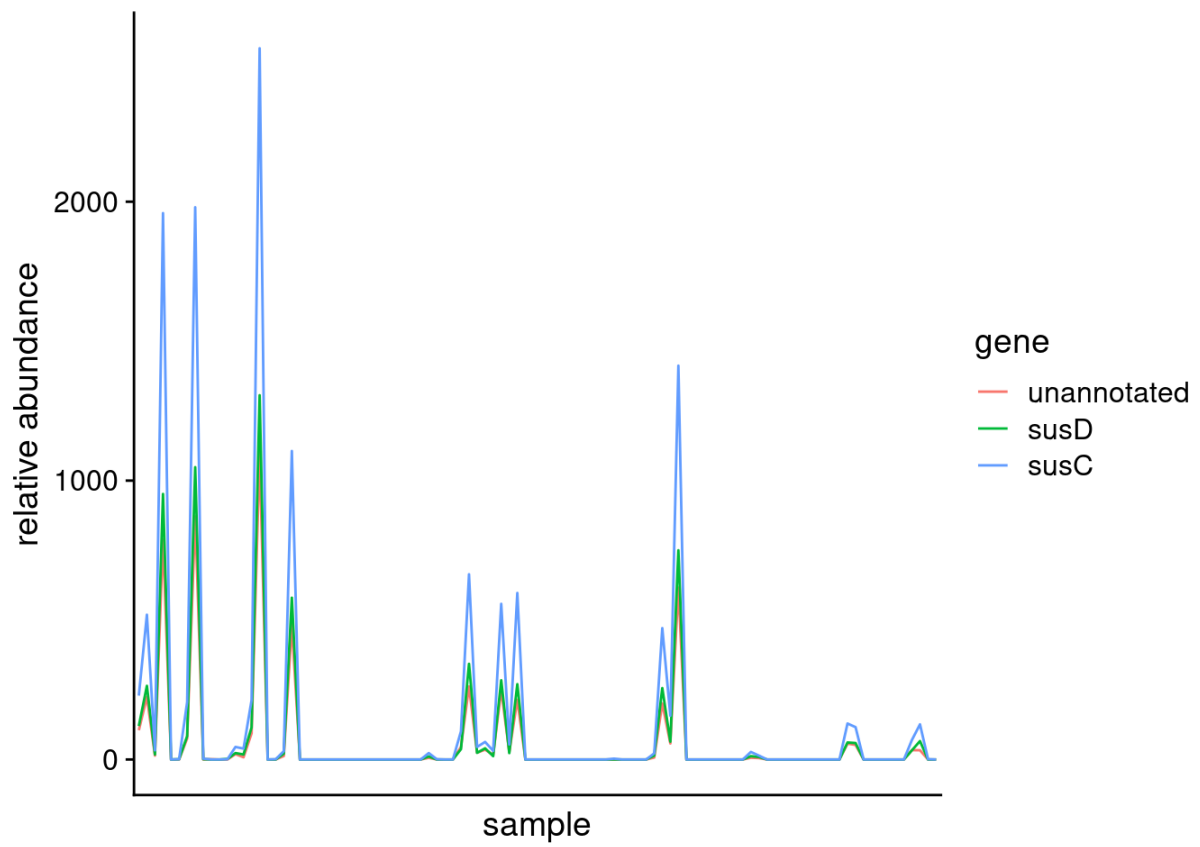
Supplementary Figure 1: Distribution of different characteristics in individuals from the RD group according to their response status: non-carriers (individuals without *Parabacteroides distasonis*), non-responders (individuals whose *P. distasonis* abundance does not increase), and responders (individuals whose *P. distasonis* abundance increases). RD = Resistant dextrin

Supplementary Figure 2: Presence/absence of genes from *Parabacteroides distasonis* in the individuals from the RD group.



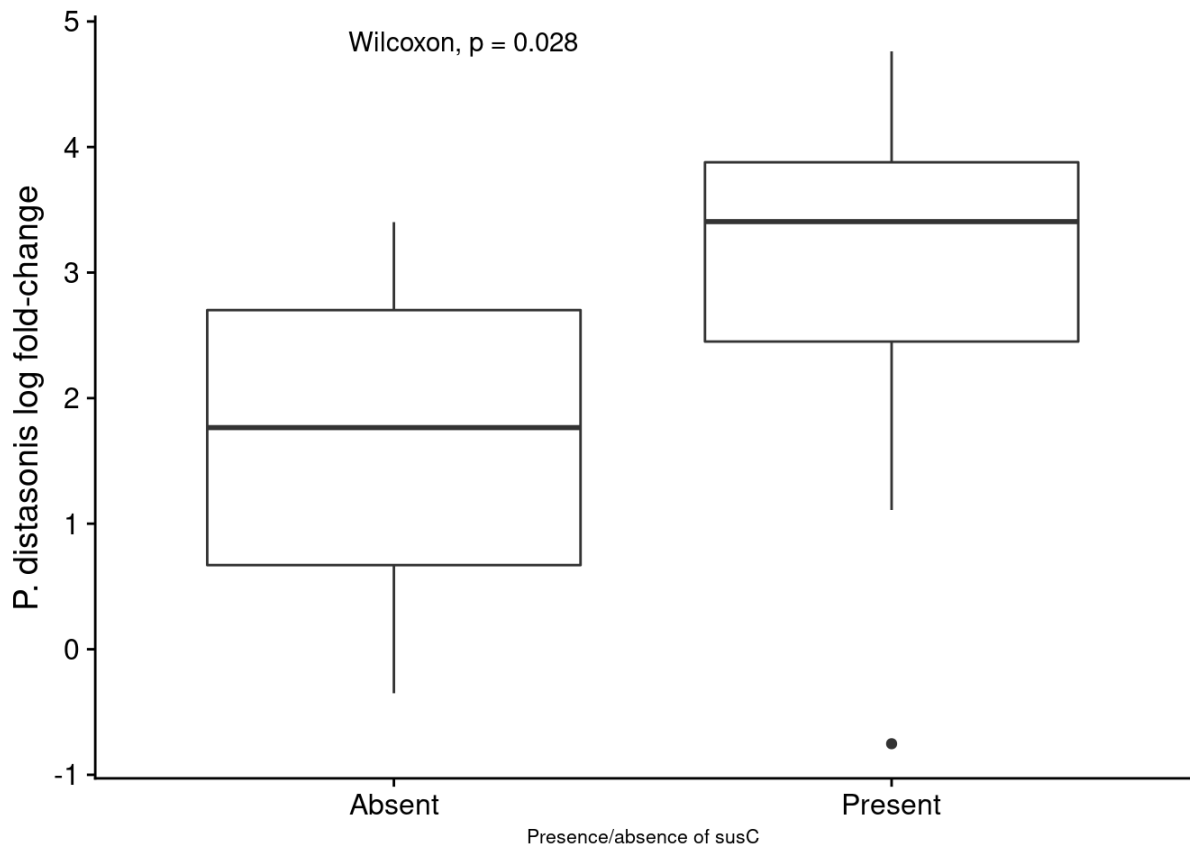
Supplementary Figure 2: Genes from the *P. distasonis* pangenome are displayed (in column) and colored according to their presence/absence in a given individual (in rows). Presence/absence of a gene in an individual is assessed considering both time points altogether (baseline and D42). Only individuals from the RD group carrying *P. distasonis* are shown (n =21). Individuals are clustered according to their gene content. The left side bar indicates *P. distasonis* log-fold change, from dark blue (highest decrease) to dark red (highest increase). *RD* = *Resistant dextrin*

Supplementary Figure 3: Profiles of susD and susC



Supplementary Figure 3: Comparison between relative abundance profiles of the genes from *P. distasonis* (susD and unannotated) whose presence in individuals is associated with *P. distasonis* log₂FC, and the gene annotated as susC that is absent from the automatic clustering of *P. distasonis*.

Supplementary Figure 4: *P. distasonis* log-fold change comparison



Supplementary Figure 4: *P. distasonis* log₂FC according to the presence/absence of both genes annotated as susC (both genes are present in the same individuals).