

Taladrid et al.

Supporting Information

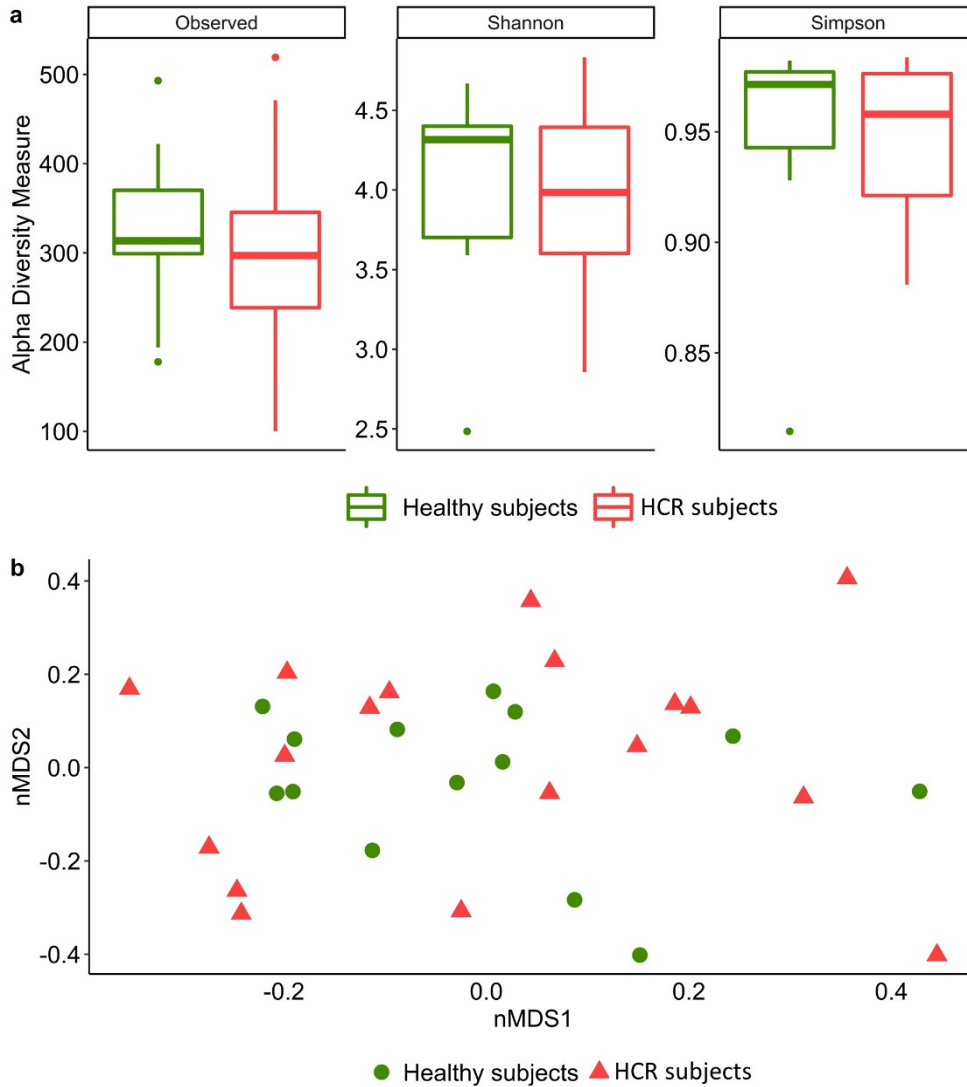


Figure S1. Bacterial diversity analysis of faecal samples before the intervention period. a) Shannon (H') diversity index as a measurement of alpha-diversity. Pairwise group comparisons confirmed no significant differences (Wilcoxon rank sum test) between healthy subjects and HCR subjects. b) Beta-diversity (nMDS) of healthy subjects and HCR subjects.

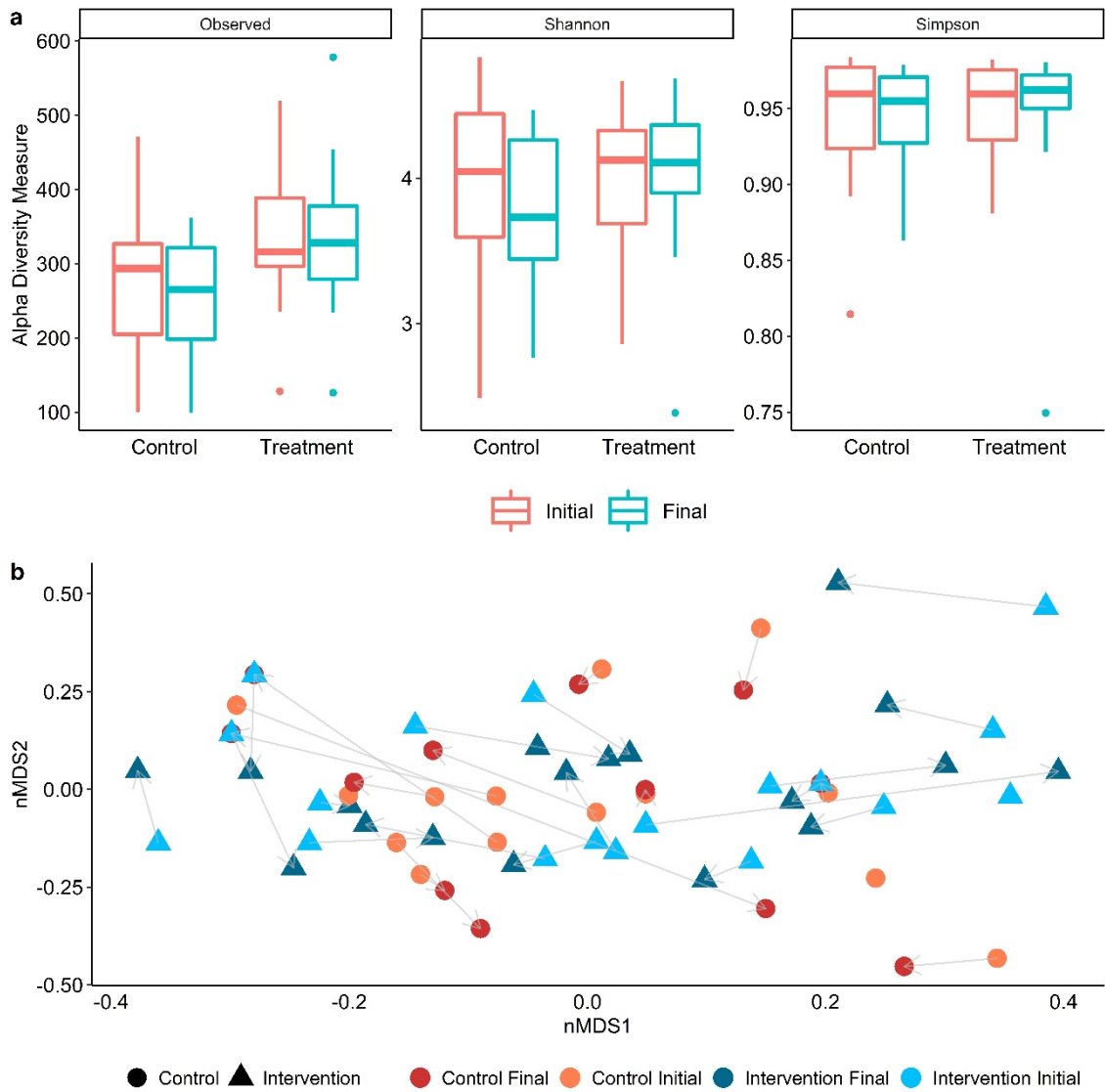


Figure S2. Bacterial diversity analysis of faecal samples before and after the intervention period. a) Shannon (H') diversity index as a measurement of alpha-diversity. Pairwise group comparisons confirmed no significant differences (Wilcoxon signed-rank test) between groups and between sampling times (before and after wine consumption) at an intra-group level. b) Beta-diversity (nMDS) of the control and intervention groups before and after the intervention. Lines join data from the same individual.

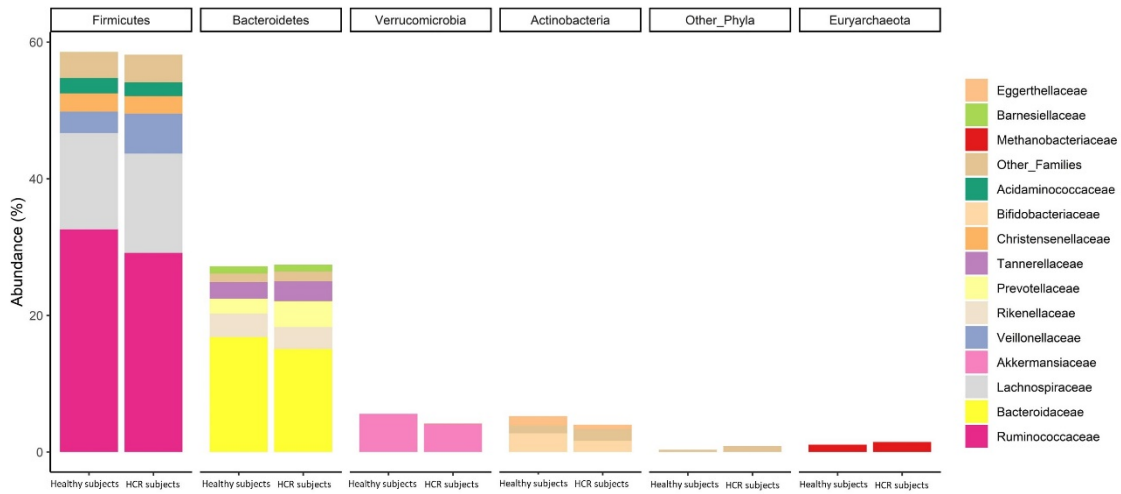


Figure S3. Relative abundance of the main bacterial phyla and families present in faecal samples and the comparison between healthy subjects and HCR subjects.

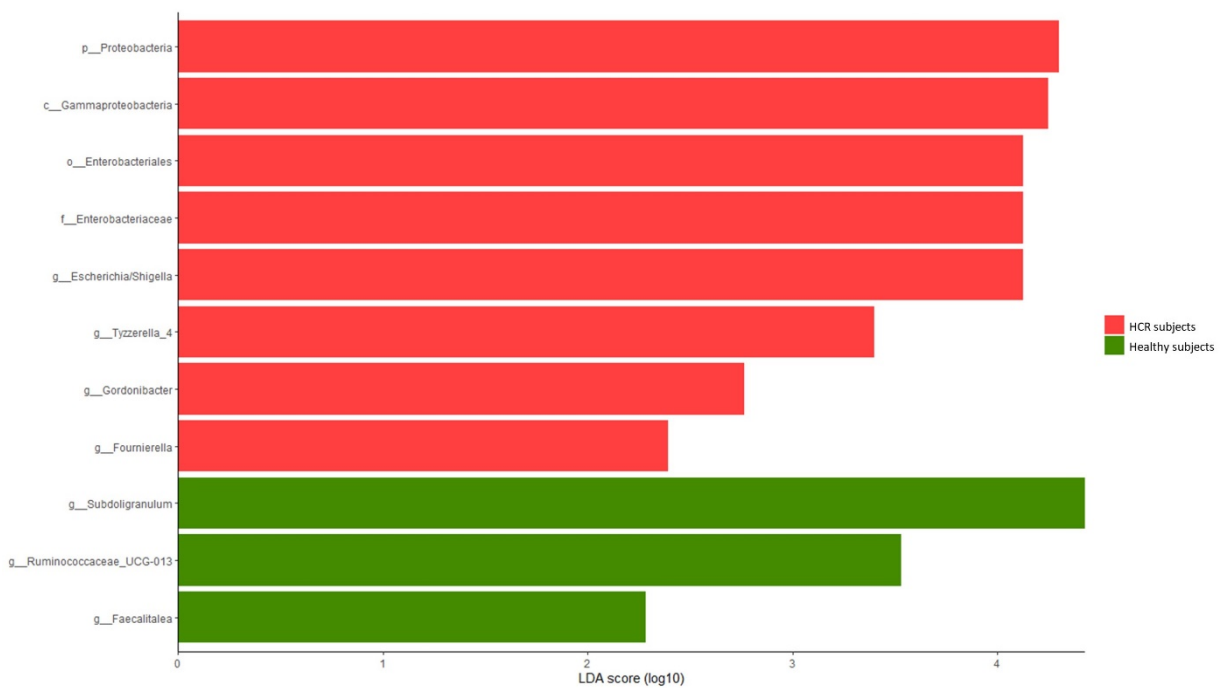


Figure S4. LDA scores (log10) for the significant biomarkers obtained from the LEfSe analysis between the groups of healthy subjects and HCR subjects.

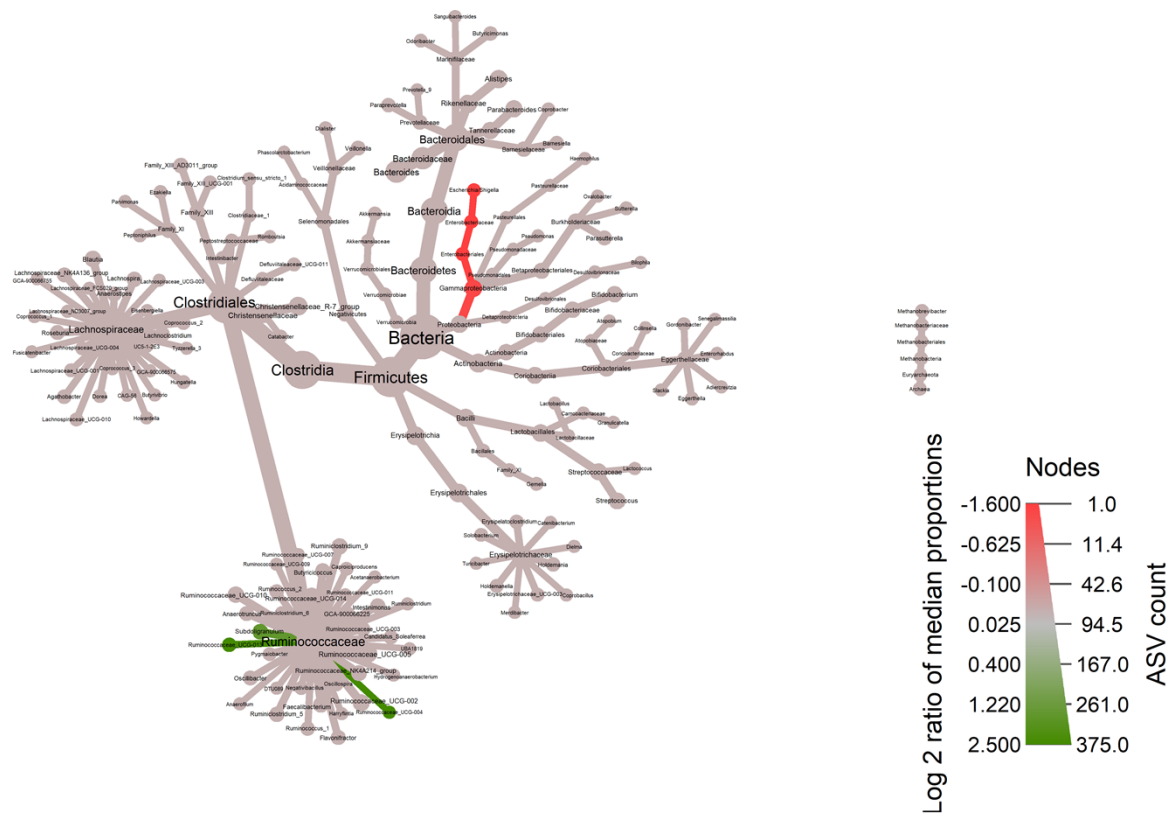


Figure S5. Heat tree showing differential abundance between healthy subjects (blue) and HCR subjects (red) according to a Wilcoxon rank sum test carried out with faecal samples at baseline and only with that ASVs present in at least 10 individuals.

Table S1. Amplicon sequence variants (ASV) correlated to clinical parameters and/or microbial-derived metabolites in the four communities obtained after bacterial co-occurrence networking.

ASV	correlated to	Community	Keystoness
G_Bacteroides	(+)BP(-)Butyric acid(-)Phenolics	(+)BP(-)Butyric acid(-)Phenolics	0.86245124
G_Bacteroides	(+)BP(-)Butyric acid(-)Phenolics	(+)BP(-)Butyric acid(-)Phenolics	0.86245124
G_Bacteroides	(+)BP(-)Butyric acid(-)Phenolics	(+)BP(-)Butyric acid(-)Phenolics	0.86245124
G_Erysipelatoclostridium	(+)BP(-)Butyric acid(-)Phenolics	(+)BP(-)Butyric acid(-)Phenolics	0.86245124
F_Lachnospiraceae	(+)BP(-)Butyric acid(-)Phenolics	(+)BP(-)Butyric acid(-)Phenolics	0.86245124
G_Marvinbryantia	(+)BP(-)Butyric acid(-)Phenolics	(+)BP(-)Butyric acid(-)Phenolics	0.86245124
G_Ruminococcaceae UCG-010	(+)BP(-)Butyric acid(-)Phenolics	(+)BP(-)Butyric acid(-)Phenolics	0.86245124
G_Subdoligranulum	(+)BP(-)Butyric acid(-)Phenolics	(+)BP(-)Butyric acid(-)Phenolics	0.86245124
G_Bacteroides	(+)BP(-)Phenolics	(+)BP(-)Butyric acid(-)Phenolics	0.83489266
G_Christensenellaceae R-7 group	(+)BP(-)Phenolics	(+)BP(-)Butyric acid(-)Phenolics	0.83489266
S_Porphyrromonas uenonis	(+)BP(-)Phenolics	(+)BP(-)Butyric acid(-)Phenolics	0.83489266
G_Ruminiclostridium	(+)BP(-)Phenolics	(+)BP(-)Butyric acid(-)Phenolics	0.83489266
F_Ruminococcaceae	(+)BP(-)Phenolics	(+)BP(-)Butyric acid(-)Phenolics	0.83489266
F_Ruminococcaceae	(+)BP(-)Phenolics	(+)BP(-)Butyric acid(-)Phenolics	0.83489266
S_Bacteroides fragilis	(+)BP(-)Butyric acid(-)Phenolics	(+)BP(-)Butyric acid(-)Phenolics	0.80761591
G_Copro bacter	(+)BP(-)Butyric acid(-)Phenolics	(+)BP(-)Butyric acid(-)Phenolics	0.80238715
G_Rikenella	(-)Butyric acid	(+)BP(-)Butyric acid(-)Phenolics	0.80132353
G_Ruminococcaceae NK4A214 group	(+)BP(-)Butyric acid(-)Phenolics	(+)BP(-)Butyric acid(-)Phenolics	0.80104992
F_Christensenellaceae	(+)BP(-)Butyric acid(-)Phenolics	(+)BP(-)Butyric acid(-)Phenolics	0.80049188
G_Ruminococcaceae NK4A214 group	(-)Butyric acid(-)Phenolics	(+)BP(-)Butyric acid(-)Phenolics	0.79809087
O_Clostridiales	(-)Butyric acid(-)Phenolics	(+)BP(-)Butyric acid(-)Phenolics	0.79412456
G_Prevotella	(+)BP(-)Butyric acid(-)Phenolics	(+)BP(-)Butyric acid(-)Phenolics	0.78183566
G_Ruminiclostridium 5	(+)BP(-)Phenolics	(+)BP(-)Butyric acid(-)Phenolics	0.76771115
F_Ruminococcaceae	(+)BP(-)Butyric acid(-)Phenolics	(+)BP(-)Butyric acid(-)Phenolics	0.7631378

G_Eubacterium	(+)BP(-)Phenolics	(+)BP(-)Butyric acid(-)Phenolics	0.76062861
G_Ruminococcaceae UCG-005	(-)Butyric acid	(+)BP(-)Butyric acid(-)Phenolics	0.74795148
G_Methanobrevibacter	(-)Butyric acid(-)Phenolics	(+)BP(-)Butyric acid(-)Phenolics	0.72353679
G_Intestinimonas	(-)Butyric acid(-)Phenolics	(+)BP(-)Butyric acid(-)Phenolics	0.71722376
O_DTU014	(-)Butyric acid(-)Phenolics	(+)BP(-)Butyric acid(-)Phenolics	0.71509562
G_Copro bacter	(+)BP(-)Butyric acid(-)Phenolics	(+)BP(-)Butyric acid(-)Phenolics	0.71443475
S_Actinomyces odontolyticus	(-)Butyric acid	(+)BP(-)Butyric acid(-)Phenolics	0.70202522
G_Alistipes	(-)Butyric acid	(+)BP(-)Butyric acid(-)Phenolics	0.70202522
G_DTU089	(-)Butyric acid	(+)BP(-)Butyric acid(-)Phenolics	0.70202522
F_Saccharimonadaceae	(-)Butyric acid	(+)BP(-)Butyric acid(-)Phenolics	0.70202522
F_Saccharimonadaceae	(-)Butyric acid	(+)BP(-)Butyric acid(-)Phenolics	0.70202522
S_Gordonibacter pamelaiae	(-)Butyric acid(-)Phenolics	(+)BP(-)Butyric acid(-)Phenolics	0.70093747
G_Enterococcus	(+)BP(-)Phenolics	(+)BP(-)Butyric acid(-)Phenolics	0.69949413
G_Methanobrevibacter	(-)Butyric acid(-)Phenolics	(+)BP(-)Butyric acid(-)Phenolics	0.68582049
G_Olsenella	(-)Butyric acid(-)Phenolics	(+)BP(-)Butyric acid(-)Phenolics	0.6786717
G_Ruminococcaceae NK4A214 group	(-)Butyric acid	(+)BP(-)Butyric acid(-)Phenolics	0.6776808
G_Christensenellaceae R-7 group	(-)Butyric acid	(+)BP(-)Butyric acid(-)Phenolics	0.6710752
F_Christensenellaceae	(-)Butyric acid(-)Phenolics	(+)BP(-)Butyric acid(-)Phenolics	0.67083745
S_Fusobacterium nucleatum	(-)Butyric acid	(+)BP(-)Butyric acid(-)Phenolics	0.65717787
F_Eggerthellaceae	(-)Butyric acid	(+)BP(-)Butyric acid(-)Phenolics	0.64592985
F_Eggerthellaceae	(-)Phenolics	(-)Phenolics	0.75806908
F_Erysipelotrichaceae	(-)Phenolics	(-)Phenolics	0.75806908
G_Faecalitalea	(-)Phenolics	(-)Phenolics	0.75806908
G_Butyricimonas	(-)Phenolics	(-)Phenolics	0.75806908
F_Muribaculaceae	(-)Phenolics	(-)Phenolics	0.75806908
F_Muribaculaceae	(-)Phenolics	(-)Phenolics	0.75806908
F_Muribaculaceae	(-)Phenolics	(-)Phenolics	0.75806908
F_Muribaculaceae	(-)Phenolics	(-)Phenolics	0.75806908

G_Ruminococcaceae UCG-014	(-)Phenolics	(-)Phenolics	0.75806908
F_Ruminococcaceae	(-)Phenolics	(-)Phenolics	0.75806908
G_Ruminococcaceae UCG-005	(-)Phenolics	(-)Phenolics	0.75806908
G_Subdoligranulum	(-)Phenolics	(-)Phenolics	0.75806908
G_Dialister	(-)Phenolics	(-)Phenolics	0.75806908
G_Bacteroides	(-)Phenolics	(-)Phenolics	0.71085076
F_Ruminococcaceae	(-)Phenolics	(-)Phenolics	0.7041538
G_Angelakisella	(-)Phenolics	(-)Phenolics	0.65861735
G_Faecalibacterium	(-)Phenolics	(-)Phenolics	0.65420968
G_Bacteroides	(+)Cholesterol(+)Glucose	(+)Cholesterol(+)Glucose	0.86818654
S_Barnesiella intestinihominis	(+)Cholesterol(+)Glucose	(+)Cholesterol(+)Glucose	0.86818654
S_Parasutterella secunda	(+)Cholesterol(+)Glucose	(+)Cholesterol(+)Glucose	0.86818654
G_Holdemanella	(+)Cholesterol(+)Glucose	(+)Cholesterol(+)Glucose	0.86818654
G_Holdemanella	(+)Cholesterol(+)Glucose	(+)Cholesterol(+)Glucose	0.86818654
G_Holdemanella	(+)Cholesterol(+)Glucose	(+)Cholesterol(+)Glucose	0.86818654
F_Prevotellaceae	(+)Cholesterol(+)Glucose	(+)Cholesterol(+)Glucose	0.86818654
G_Prevotella 9	(+)Cholesterol(+)Glucose	(+)Cholesterol(+)Glucose	0.86818654
G_Prevotella 9	(+)Cholesterol(+)Glucose	(+)Cholesterol(+)Glucose	0.86818654
F_Prevotellaceae	(+)Cholesterol(+)Glucose	(+)Cholesterol(+)Glucose	0.86818654
G_Ruminococcaceae UCG-004	(+)Cholesterol(+)Glucose	(+)Cholesterol(+)Glucose	0.86818654
G_Ruminococcaceae UCG-005	(+)Cholesterol(+)Glucose	(+)Cholesterol(+)Glucose	0.86818654
G_Negativibacillus	(+)Cholesterol(+)Glucose	(+)Cholesterol(+)Glucose	0.86818654
G_Subdoligranulum	(+)Cholesterol(+)Glucose	(+)Cholesterol(+)Glucose	0.86818654
G_Subdoligranulum	(+)Cholesterol(+)Glucose	(+)Cholesterol(+)Glucose	0.86818654
G_Parabacteroides	(+)Cholesterol(+)Glucose	(+)Cholesterol(+)Glucose	0.86818654
G_Allisonella	(+)Cholesterol(+)Glucose	(+)Cholesterol(+)Glucose	0.86818654
G_Dialister	(+)Cholesterol(+)Glucose	(+)Cholesterol(+)Glucose	0.86818654
G_Parabacteroides	(+)Cholesterol(+)Glucose	(+)Cholesterol(+)Glucose	0.82935041

G_Parabacteroides	(+)Glucose	(+)Cholesterol(+)Glucose	0.81883202
F_Ruminococcaceae	(+)Cholesterol(+)Glucose	(+)Cholesterol(+)Glucose	0.78778786
G_Lachnospiraceae UCG-010	(+)Glucose	(+)Cholesterol(+)Glucose	0.77699938
G_Negativibacillus	(+)Glucose	(+)Cholesterol(+)Glucose	0.77699938
G_Christensenellaceae R-7 group	(+)Glucose	(+)Cholesterol(+)Glucose	0.76614238
G_Parasutterella	(+)Cholesterol(+)Glucose	(+)Cholesterol(+)Glucose	0.76096304
G_Anaerofilum	(+)Cholesterol(+)Glucose	(+)Cholesterol(+)Glucose	0.76096304
F_Ruminococcaceae	(+)Glucose	(+)Cholesterol(+)Glucose	0.74454675
G_Catenibacterium	(+)Glucose	(+)Cholesterol(+)Glucose	0.72582345
F_Ruminococcaceae	(+)Cholesterol(+)Glucose	(+)Cholesterol(+)Glucose	0.7036379
G_Ruminococcaceae UCG-014	(+)Cholesterol	(+)Cholesterol(+)Glucose	0.70334566
S_Faecalicoccus pleomorphus	(+)Cholesterol(+)Glucose	(+)Cholesterol(+)Glucose	0.67999734
F_Lachnospiraceae	(+)Cholesterol	(+)Cholesterol(+)Glucose	0.67318677
G_Family XIII AD3011 group	(+)Cholesterol	(+)Cholesterol(+)Glucose	0.66847504
S_Flavonifractor plautii	(+)Cholesterol	(+)Cholesterol(+)Glucose	0.66538279
G_Paraprevotella	(+)Cholesterol	(+)Cholesterol(+)Glucose	0.60656758
G_Phascalartobacterium	(-)Creatinine(-)Leukocytes(-)Weight	(-)Creatinine(-)Leukocytes(-)Weight	0.76998151
G_Phascalartobacterium	(-)Creatinine(-)Leukocytes(-)Weight	(-)Creatinine(-)Leukocytes(-)Weight	0.76998151
G_Phascalartobacterium	(-)Creatinine(-)Leukocytes(-)Weight	(-)Creatinine(-)Leukocytes(-)Weight	0.76998151
G_Bacteroides	(-)Creatinine(-)Leukocytes(-)Weight	(-)Creatinine(-)Leukocytes(-)Weight	0.76998151
G_Bacteroides	(-)Creatinine(-)Leukocytes(-)Weight	(-)Creatinine(-)Leukocytes(-)Weight	0.76998151
G_Bacteroides	(-)Creatinine(-)Leukocytes(-)Weight	(-)Creatinine(-)Leukocytes(-)Weight	0.76998151
G_Butyricimonas	(-)Creatinine(-)Leukocytes(-)Weight	(-)Creatinine(-)Leukocytes(-)Weight	0.76998151
G_Butyricimonas	(-)Creatinine(-)Leukocytes(-)Weight	(-)Creatinine(-)Leukocytes(-)Weight	0.76998151
G_Paraprevotella	(-)Creatinine(-)Leukocytes(-)Weight	(-)Creatinine(-)Leukocytes(-)Weight	0.76998151
G_Paraprevotella	(-)Creatinine(-)Leukocytes(-)Weight	(-)Creatinine(-)Leukocytes(-)Weight	0.76998151
G_Alistipes	(-)Creatinine(-)Leukocytes(-)Weight	(-)Creatinine(-)Leukocytes(-)Weight	0.76998151
G_Alistipes	(-)Creatinine(-)Leukocytes(-)Weight	(-)Creatinine(-)Leukocytes(-)Weight	0.76998151

G_Ruminococcaceae UCG-014	(-)Creatinine(-)Leukocytes(-)Weight	(-)Creatinine(-)Leukocytes(-)Weight	0.76998151
G_Ruminococcaceae UCG-014	(-)Creatinine(-)Leukocytes(-)Weight	(-)Creatinine(-)Leukocytes(-)Weight	0.76998151
F_Ruminococcaceae	(-)Creatinine(-)Leukocytes(-)Weight	(-)Creatinine(-)Leukocytes(-)Weight	0.76998151
G_Ruminococcaceae NK4A214 group	(-)Creatinine(-)Leukocytes(-)Weight	(-)Creatinine(-)Leukocytes(-)Weight	0.76998151
G_Ruminococcaceae UCG-005	(-)Creatinine(-)Leukocytes(-)Weight	(-)Creatinine(-)Leukocytes(-)Weight	0.76998151
G_Ruminococcaceae_UCG-010	(-)Creatinine(-)Leukocytes(-)Weight	(-)Creatinine(-)Leukocytes(-)Weight	0.76998151
F_Ruminococcaceae	(-)Creatinine(-)Leukocytes(-)Weight	(-)Creatinine(-)Leukocytes(-)Weight	0.76998151
G_Parabacteroides	(-)Creatinine(-)Leukocytes(-)Weight	(-)Creatinine(-)Leukocytes(-)Weight	0.76998151
G_Parabacteroides	(-)Creatinine(-)Leukocytes(-)Weight	(-)Creatinine(-)Leukocytes(-)Weight	0.76998151
G_Ruminococcaceae UCG-005	(-)Creatinine(-)Weight	(-)Creatinine(-)Leukocytes(-)Weight	0.7317685
G_Alistipes	(-)Weight	(-)Creatinine(-)Leukocytes(-)Weight	0.72581931
G_Ruminococcaceae UCG-014	(-)Leukocytes	(-)Creatinine(-)Leukocytes(-)Weight	0.68315734
S_Phascalactobacterium succinatutens	(-)Leukocytes	(-)Creatinine(-)Leukocytes(-)Weight	0.68261174
G_Bacteroides	(-)Leukocytes	(-)Creatinine(-)Leukocytes(-)Weight	0.68261174
G_Ruminococcus 1	(-)Leukocytes	(-)Creatinine(-)Leukocytes(-)Weight	0.67483768
G_Parabacteroides	(-)Creatinine	(-)Creatinine(-)Leukocytes(-)Weight	0.67188655
G_Barnesiella	(-)Leukocytes	(-)Creatinine(-)Leukocytes(-)Weight	0.67073368
G_Butyricimonas	(-)Leukocytes	(-)Creatinine(-)Leukocytes(-)Weight	0.66497361
G_Bacteroides	(-)Leukocytes	(-)Creatinine(-)Leukocytes(-)Weight	0.66209737
G_Pygmaibacter	(-)Creatinine(-)Weight	(-)Creatinine(-)Leukocytes(-)Weight	0.65917934
S_Prevotella timonensis	(-)Creatinine(-)Weight	(-)Creatinine(-)Leukocytes(-)Weight	0.65763952
G_Paraprevotella	(-)Creatinine(-)Leukocytes(-)Weight	(-)Creatinine(-)Leukocytes(-)Weight	0.65760176
G_Butyricimonas	(-)Leukocytes	(-)Creatinine(-)Leukocytes(-)Weight	0.65591882
G_Barnesiella	(-)Creatinine(-)Weight	(-)Creatinine(-)Leukocytes(-)Weight	0.64979569
G_Porphyrimonas	(-)Creatinine(-)Weight	(-)Creatinine(-)Leukocytes(-)Weight	0.64812211
G_Defluviitaleaceae UCG-011	(-)Creatinine(-)Weight	(-)Creatinine(-)Leukocytes(-)Weight	0.64794966
S_Prevotella 6 corporis	(-)Leukocytes	(-)Creatinine(-)Leukocytes(-)Weight	0.64757782

G_Porphyrromonas	(-)Weight	(-)Creatinine(-)Leukocytes(-)Weight	0.64205069
C_Bacteroidia	(-)Leukocytes	(-)Creatinine(-)Leukocytes(-)Weight	0.6234686
F_Ruminococcaceae	(-)Creatinine(-)Weight	(-)Creatinine(-)Leukocytes(-)Weight	0.62257628
F_Ruminococcaceae	(-)Creatinine(-)Weight	(-)Creatinine(-)Leukocytes(-)Weight	0.56587745
