## Significant metadata correlation heatmap

Variables

FDR-values: < 0.001 = \*\*\*, < 0.01 = \*\*, < 0.1 = \* Erysipelatoclostridiaceae - • Family Frisingicoccus - • Bifidobacterium - • [Eubacterium] coprostanoligenes group Butyricicoccus - • Ruminococcus - • Anaerofustaceae Clostridia vadinBB60 group -Bacteroidaceae Defluviitaleaceae UCG-011 - • Ruminococcaceae -Bifidobacteriaceae [Eubacterium] coprostanoligenes group - • Muribaculaceae -Butyricicoccaceae Erysipelatoclostridium - • Lachnoclostridium - • Effect size Christensenellaceae Lachnospiraceae UCG-006 - • Ruminococcaceae UBA1819 -Clostridiaceae 0.5 Pygmaiobacter - • Defluviitaleaceae Dorea -Marvinbryantia - • Feature Value 0.0 Enterobacteriaceae Bacteroides - • Anaerostipes - • Enterococcaceae Oscillospiraceae NK4A214 group - • -0.5 Anaerofustis -Erysipelatoclostridiaceae Paludicola -Erysipelotrichaceae Parasutterella -Parabacteroides - • Lachnospiraceae Lachnospiraceae A2 - • status Erysipelotrichaceae - • Christensenellaceae R-7 group - • Monoglobaceae Confounded Enterococcus - • Muribaculaceae Gastranaerophilales - • Deconfounded [Eubacterium] siraeum group -Oscillospiraceae Roseburia -Peptostreptococcaceae Lachnospiraceae NK4A136 group - • Candidatus Saccharimonas -Ruminococcaceae Clostridium sensu stricto 1 - • Clostridia UCG-014 - • Saccharimonadaceae Escherichia-Shigella - • Monoglobus - • Staphylococcaceae Romboutsia -Clostridia - • Sutterellaceae Jeotgalicoccus - • Tannerellaceae Oscillibacter -Family Cytokines **SCFAs** Memb. receptors Cognition Treatments NA Family NR2B CCL20