Supplementary Figures

Supplementary Figure 1 Venn diagrams of A) 295 C-reactive protein (CRP) independent SNPs which are also genome-wide significantly associated with any of the other examined traits (high density lipoprotein levels, HDL; low density lipoprotein levels, LDL; triglyceride levels, TG; body mass index BMI; cigarettes per day, CPD) in multi-trait MTAG and B) the same focusing on the novel CRP SNPs only

Supplementary Figure 2 Circular dendrogram presenting the novel C-reactive protein (CRP) loci Starting from the center, the layers represent the chromosome, rsID, MTAG analysis (1 = multi-trait, 2 = bivariate on CRP-lipids, 3 = bivariate on CRP-BMI), and the mapped genes, respectively. The loci from multi-trait MTAG are colored with blue and from bivariate with red

Supplementary Figure 3 Regional plots of the 41 novel C-reactive protein (CRP) loci comparing the results from the MTAG (blue) with the respective from the univariate UKB-CHARGE meta-analysis (yellow). The P-values come from two-sided statistical tests.

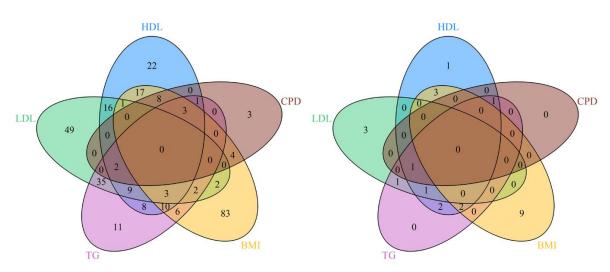
Supplementary Figure 4 Venn diagram of C-Reactive Protein (CRP) associated genes which are also associated with any of High-Density Lipoprotein (HDL), Low-Density Lipoprotein (LDL), Triglycerides (TG), Body Mass Index (BMI), and Cigarettes per day (CPD)

Supplementary Figure 5 Tissue expression analysis of a) 30 general and b) 54 more specific tissue types obtained from Genotype-Tissue Expression version 8 (GTEx v8) for C-Reactive Protein (CRP), Body Mass Index (BMI), High-Density Lipoprotein (HDL), Low-Density Lipoprotein (LDL), Triglycerides (TG), and Cigarettes per day (CPD) using MAGMA gene-property test. The P-values come from two-sided statistical tests. Horizontal line represents the Bonferroni threshold (a: $P=1.7\times10^{-3}$; b: $P=9.3\times10^{-4}$) and Bonferroni significant tissues are colored with red

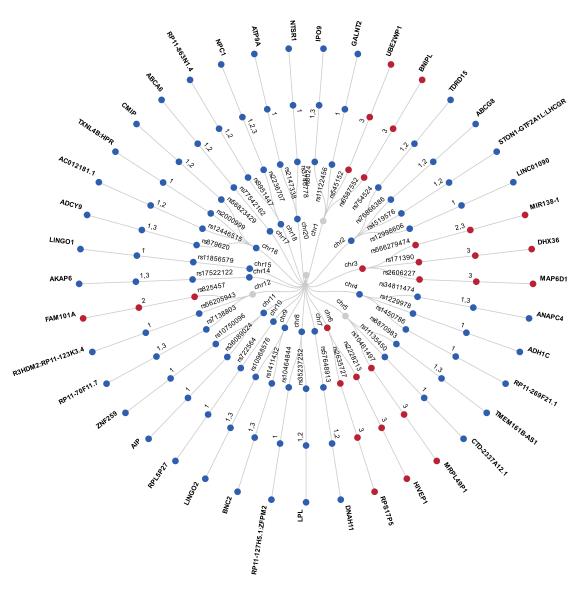
Supplementary Figure 6 Venn diagram of the 41 candidate causal variants which colocalize between C-Reactive Protein levels (CRP) and any of the other examined traits: High-Density Lipoprotein (HDL), Low-Density Lipoprotein (LDL), Triglycerides (TG), Body Mass Index (BMI), and Cigarettes per day (CPD)

Supplementary Figure 7 Regional plots of the 41 loci found to colocalize between C-Reactive Protein levels (CRP) and any of the other examined traits: High-Density Lipoprotein (HDL), Low-Density Lipoprotein (LDL), Triglycerides (TG), Body Mass Index (BMI), and Cigarettes per day (CPD). The P-values come from two-sided statistical tests.

A B

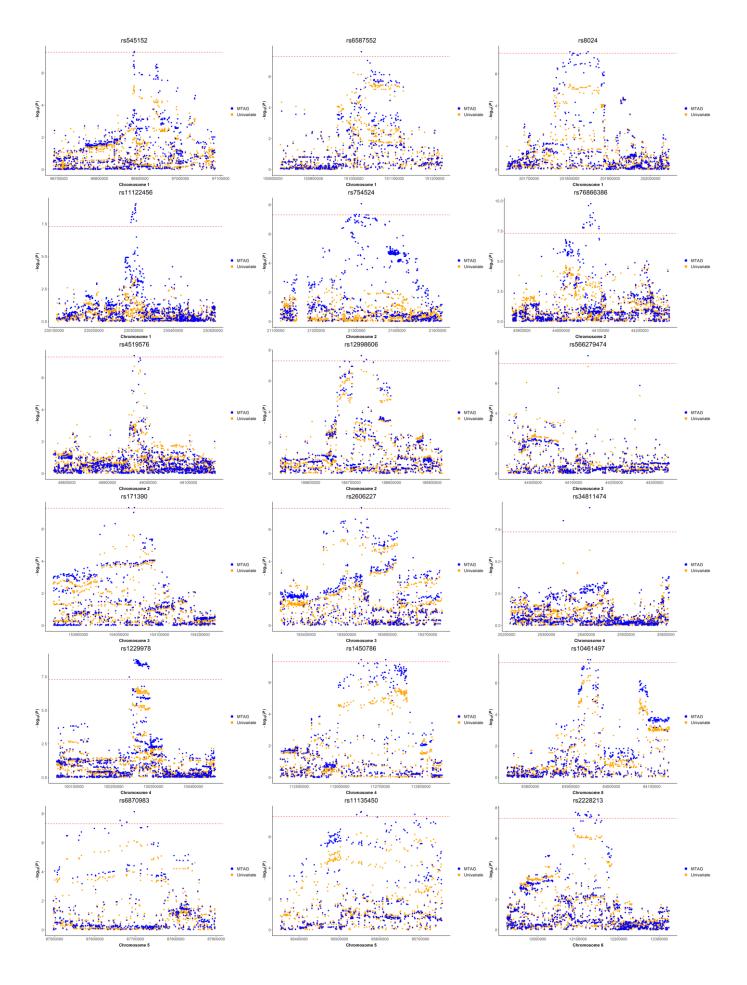


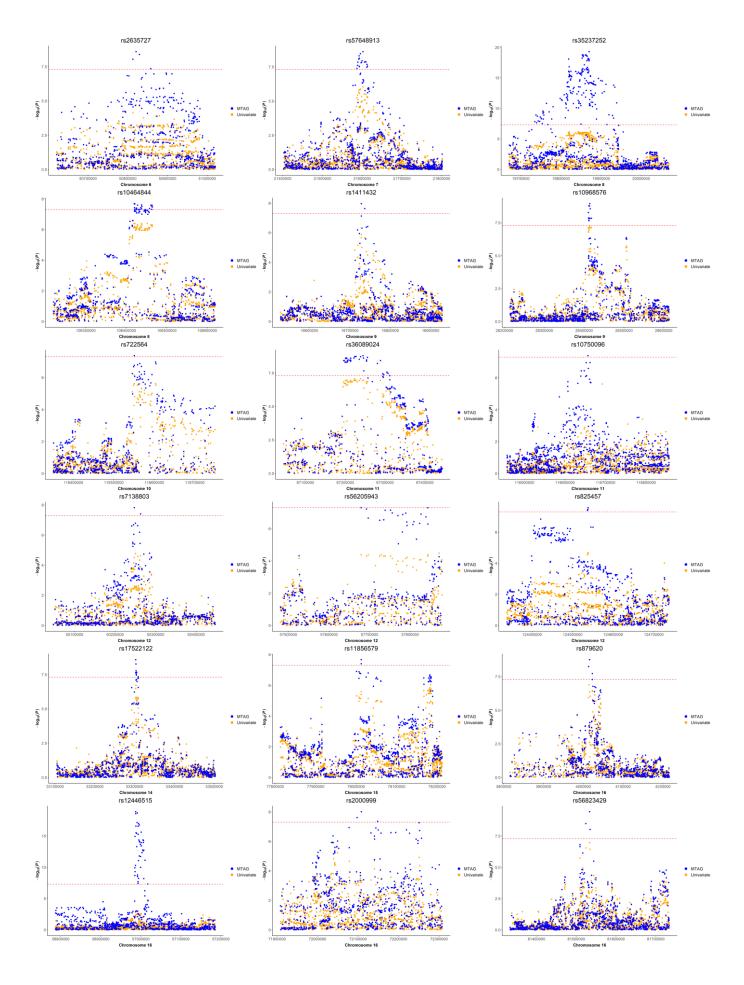
Supplementary Figure 1 Venn diagrams of A) 295 C-reactive protein (CRP) independent SNPs which are also genome-wide significantly associated with any of the other examined traits (high density lipoprotein levels, HDL; low density lipoprotein levels, LDL; triglyceride levels, TG; body mass index BMI; cigarettes per day, CPD) in multitrait MTAG and B) the same focusing on the novel CRP SNPs only

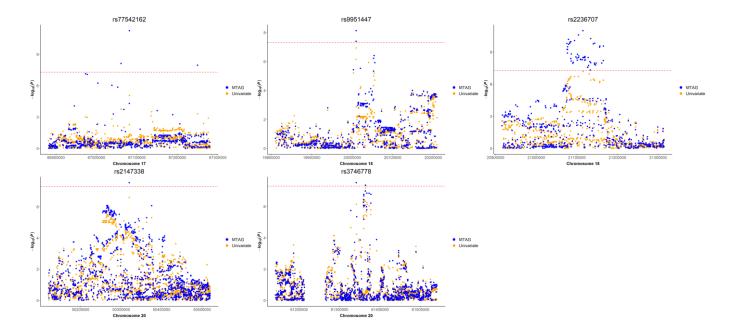


Supplementary Figure 2 Circular dendrogram presenting the novel C-reactive protein (CRP) loci Starting from the center, the layers represent the chromosome, rsID, MTAG analysis (1 = multi-trait, 2 = bivariate on CRP-lipids, 3 = bivariate on CRP-BMI), and the mapped genes, respectively. The loci from multi-trait MTAG are colored with blue and from bivariate with red

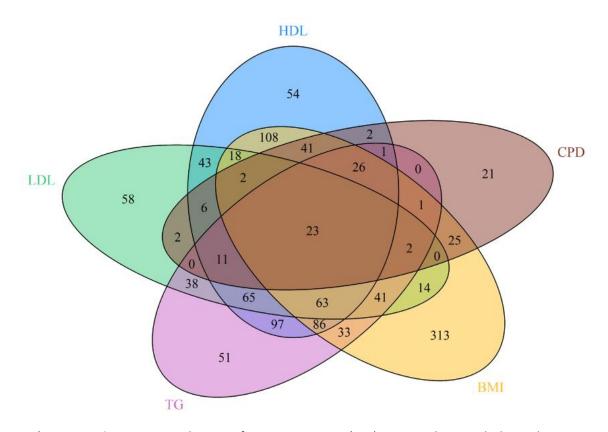
 $BMI = Body \ mass \ index; \ CPD = Cigarettes \ per \ day; \ CRP = C-reactive \ protein; \ HDL = High-Density \ lipoprotein; \ LDL = Low-Density \ lipoprotein; \ TG = Triglycerides$



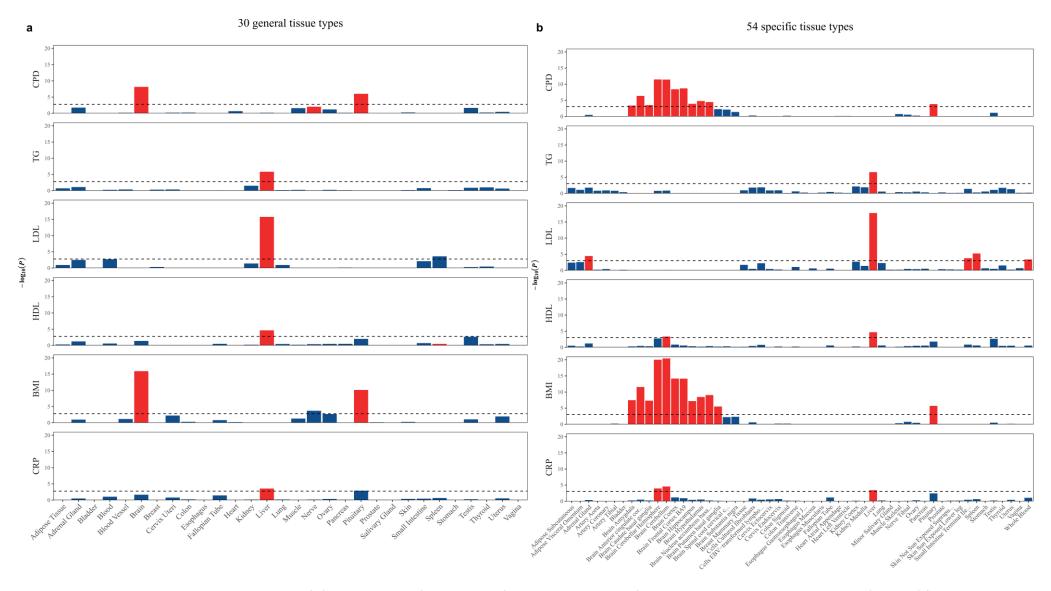




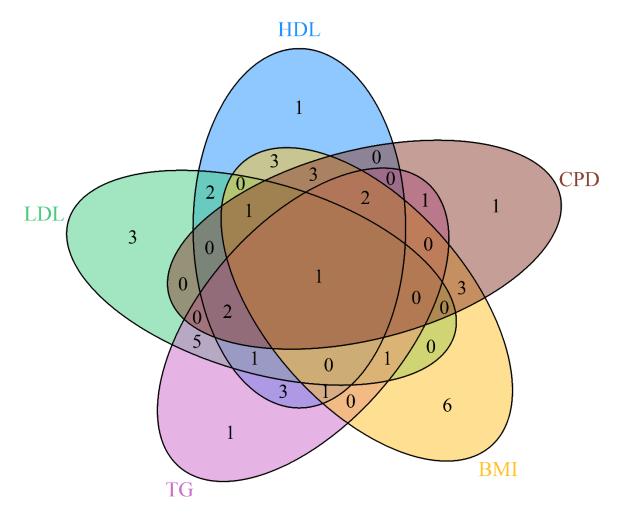
Supplementary Figure 3 Regional plots of the 41 novel C-reactive protein (CRP) loci comparing the results from the MTAG (blue) with the respective from the univariate UKB-CHARGE meta-analysis (yellow). The P-values come from two-sided statistical tests.



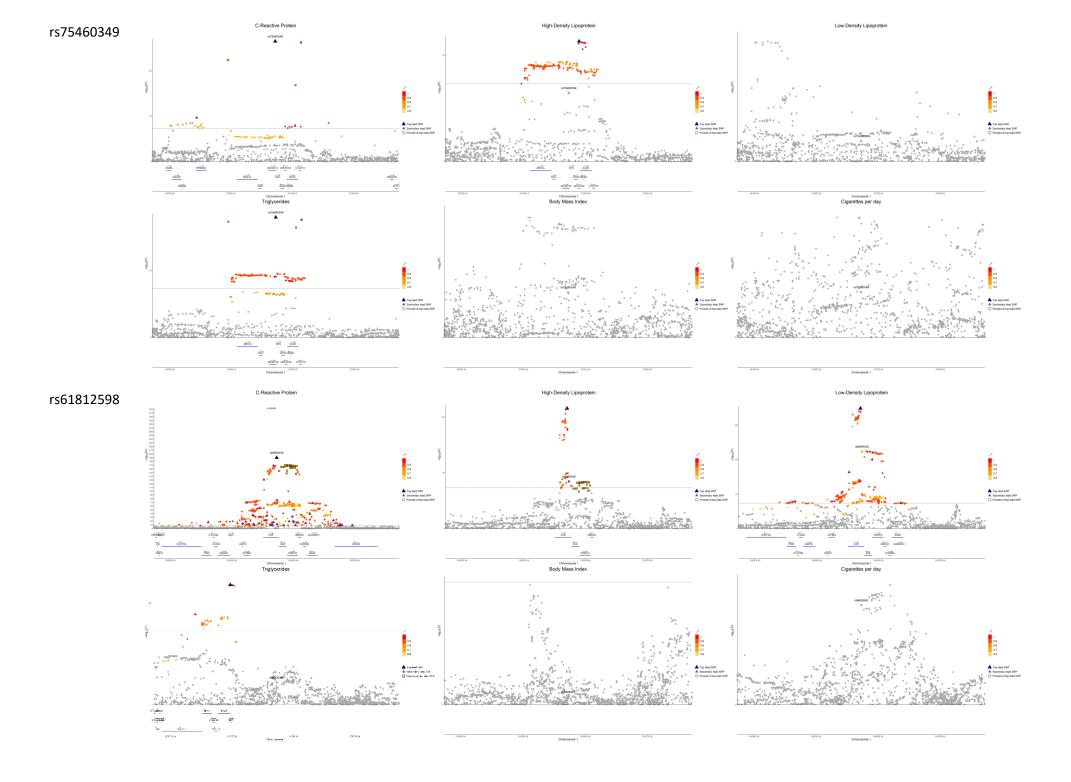
Supplementary Figure 4 Venn diagram of C-Reactive Protein (CRP) associated genes which are also associated with any of High-Density Lipoprotein (HDL), Low-Density Lipoprotein (LDL), Triglycerides (TG), Body Mass Index (BMI), and Cigarettes per day (CPD)

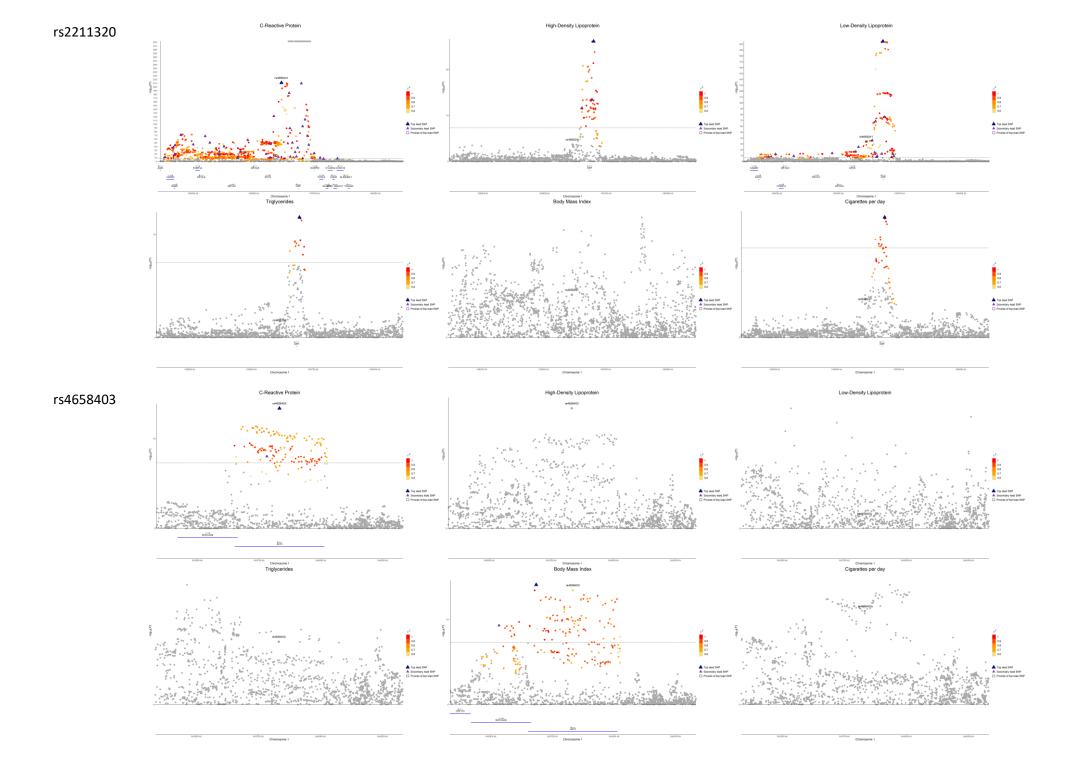


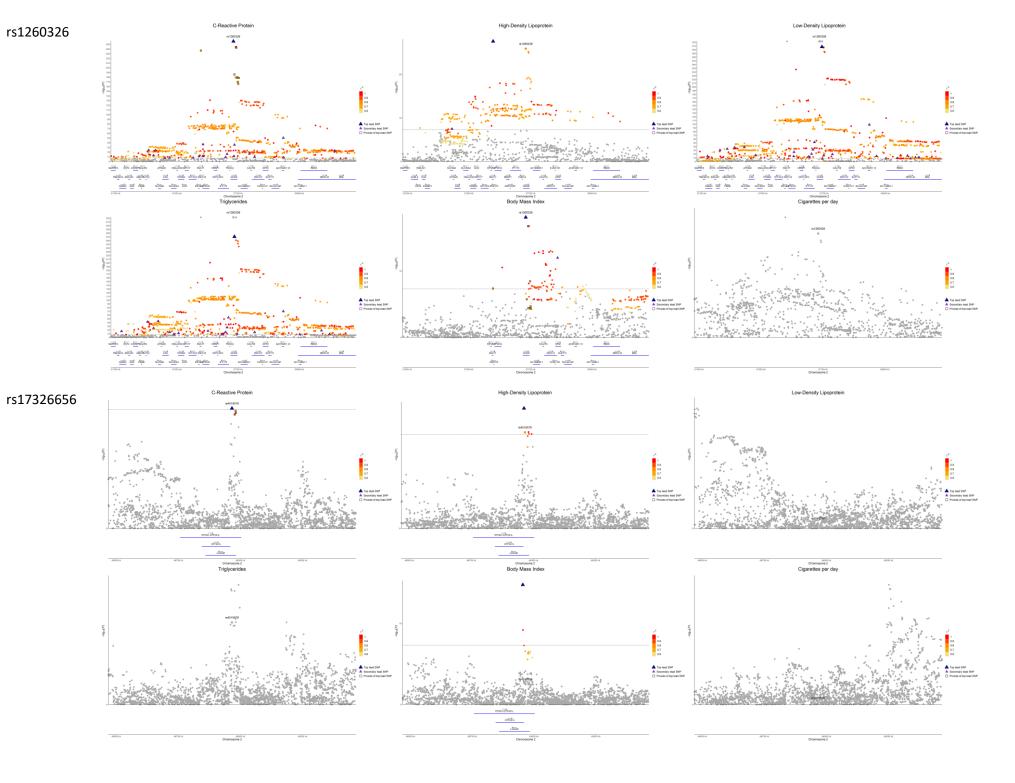
Supplementary Figure 5 Tissue expression analysis of a) 30 general and b) 54 more specific tissue types obtained from Genotype-Tissue Expression version 8 (GTEx v8) for C-Reactive Protein (CRP), Body Mass Index (BMI), High-Density Lipoprotein (HDL), Low-Density Lipoprotein (LDL), Triglycerides (TG), and Cigarettes per day (CPD) using MAGMA gene-property test. The P-values come from two-sided statistical tests. Horizontal line represents the Bonferroni threshold (a: $P=1.7\times10^{-3}$; b: $P=9.3\times10^{-4}$) and Bonferroni significant tissues are colored with red

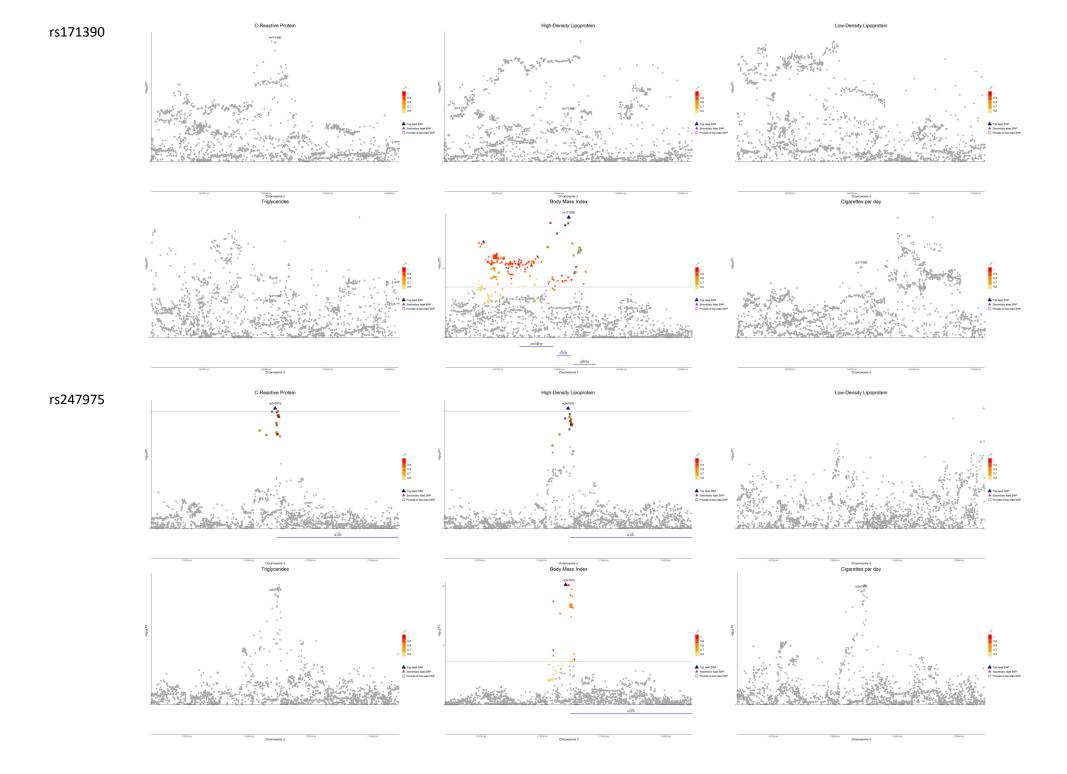


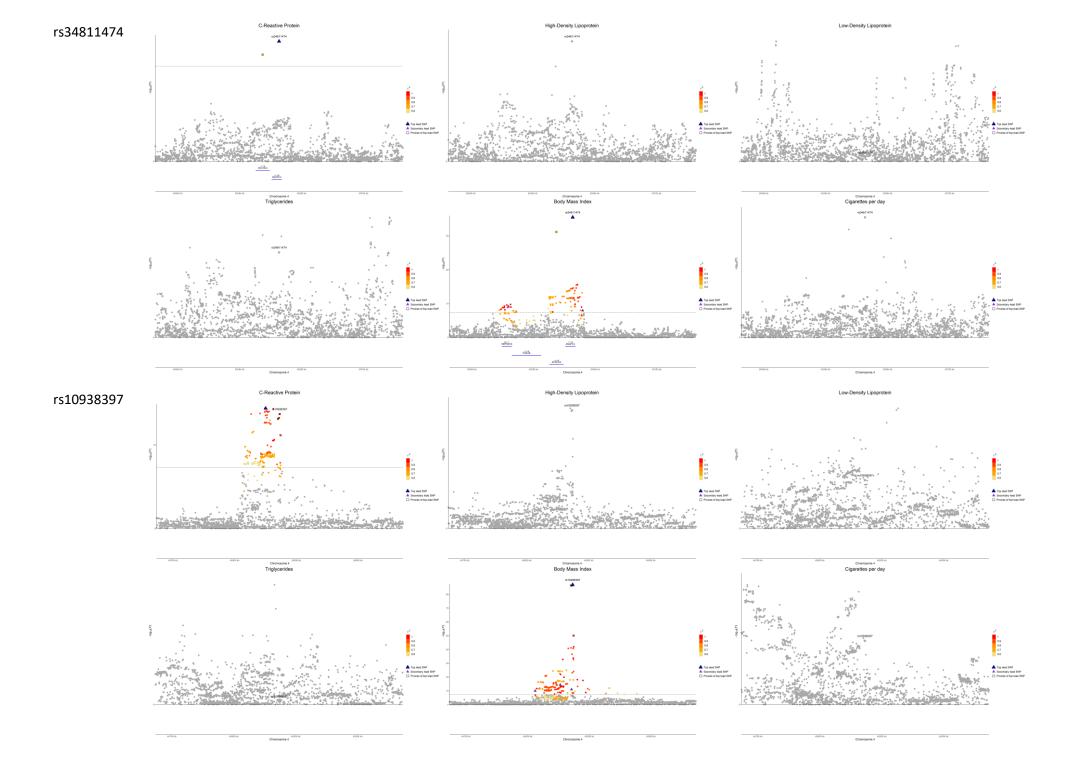
Supplementary Figure 6 Venn diagram of the 41 candidate causal variants which colocalize between C-Reactive Protein levels (CRP) and any of the other examined traits: High-Density Lipoprotein (HDL), Low-Density Lipoprotein (LDL), Triglycerides (TG), Body Mass Index (BMI), and Cigarettes per day (CPD)

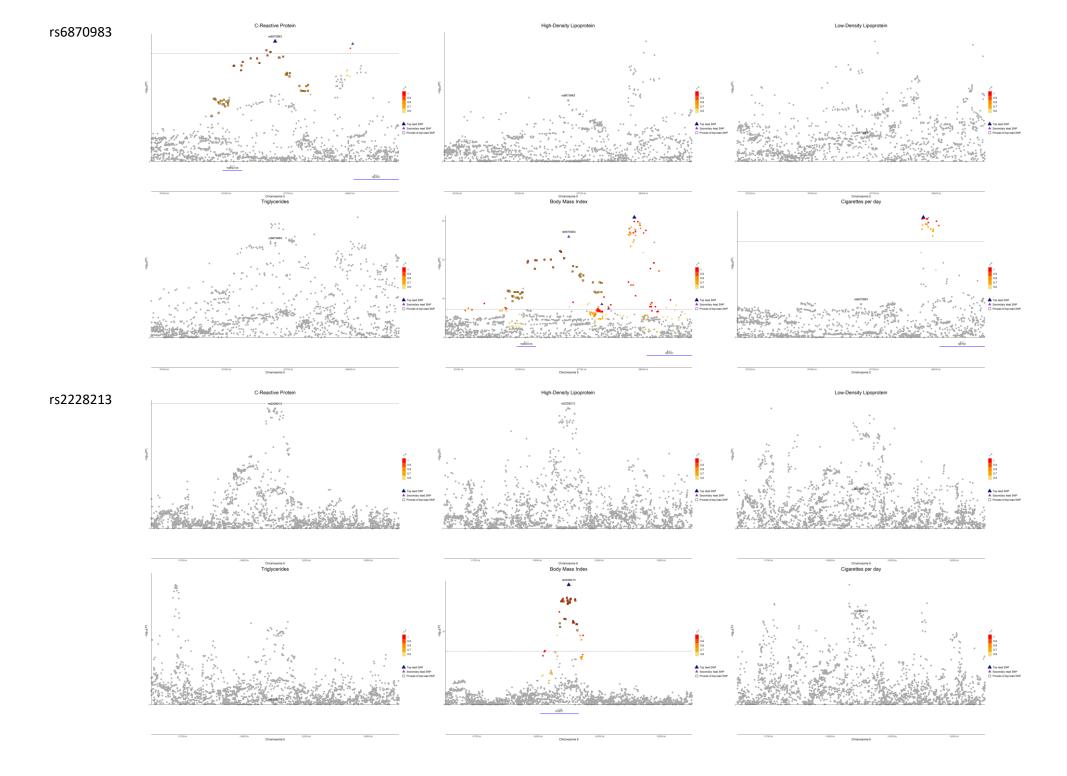


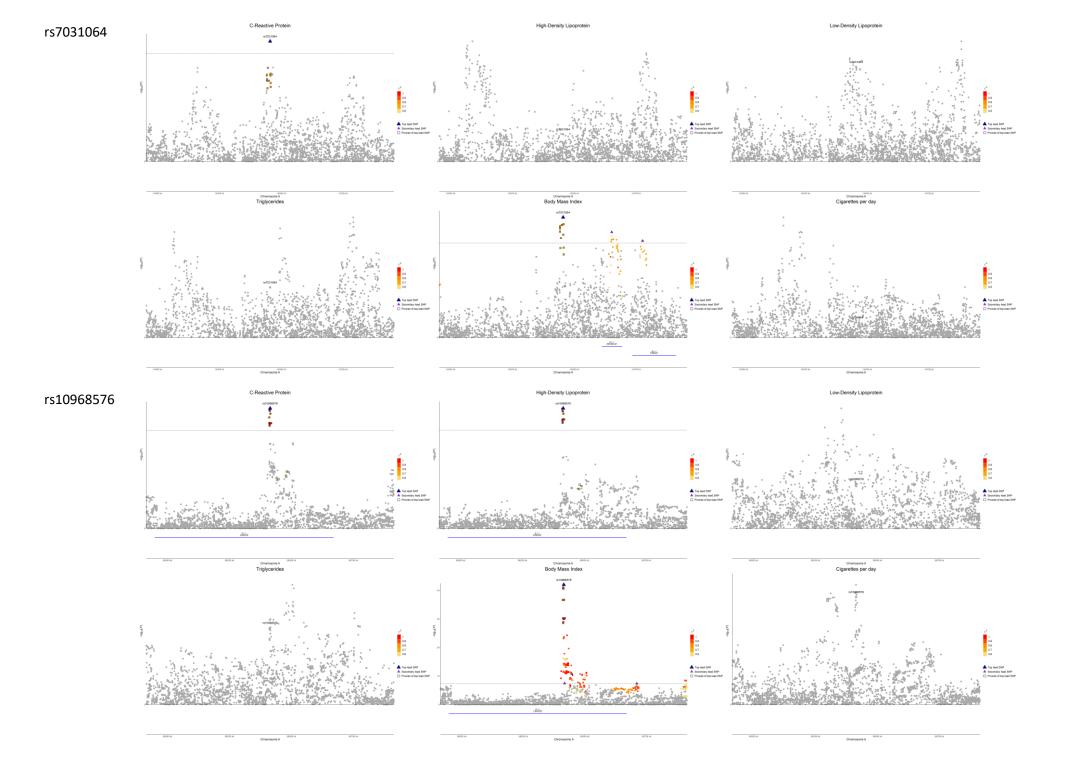


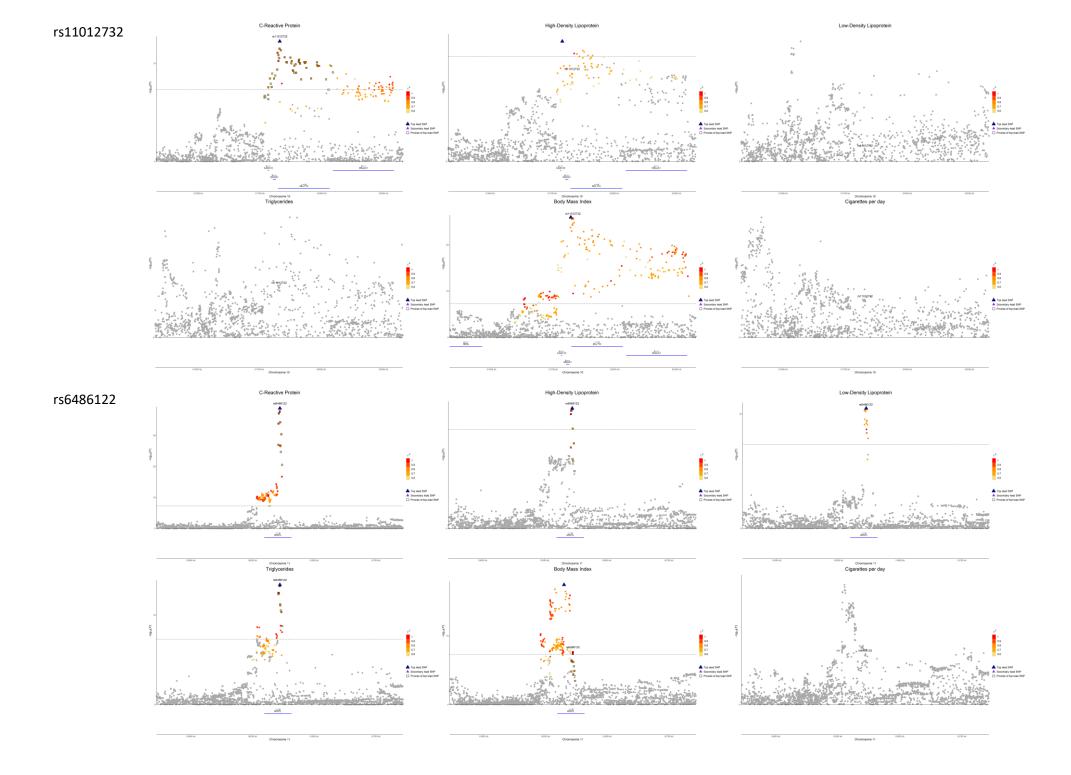


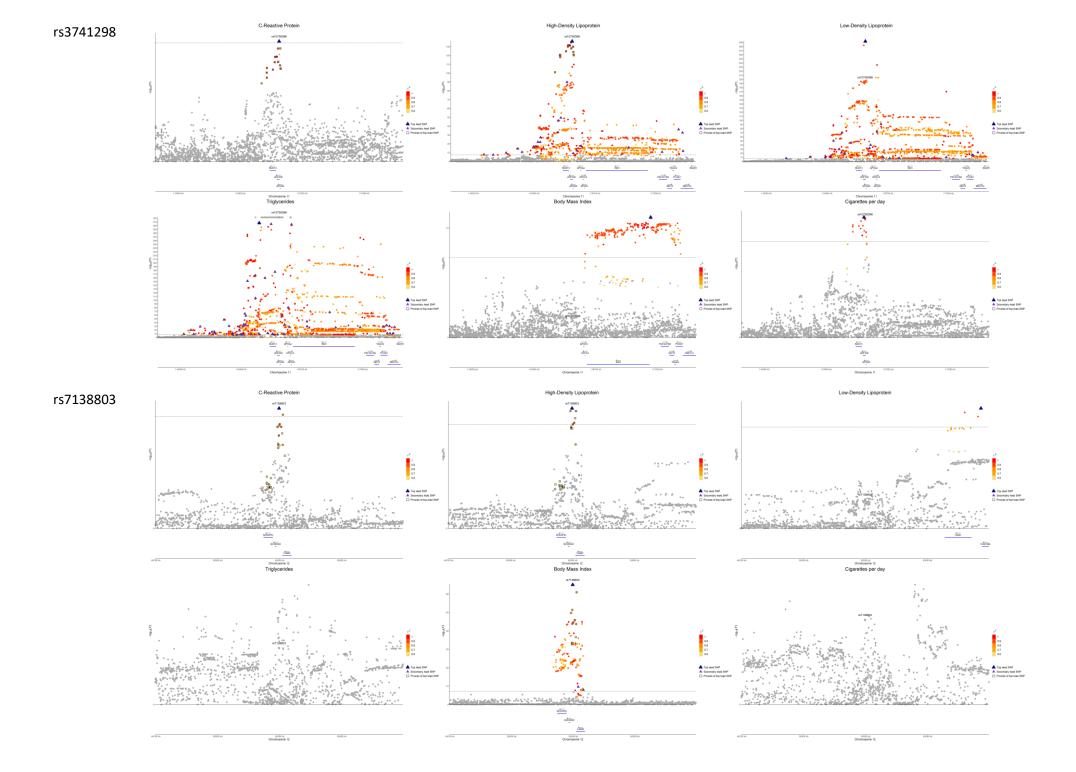


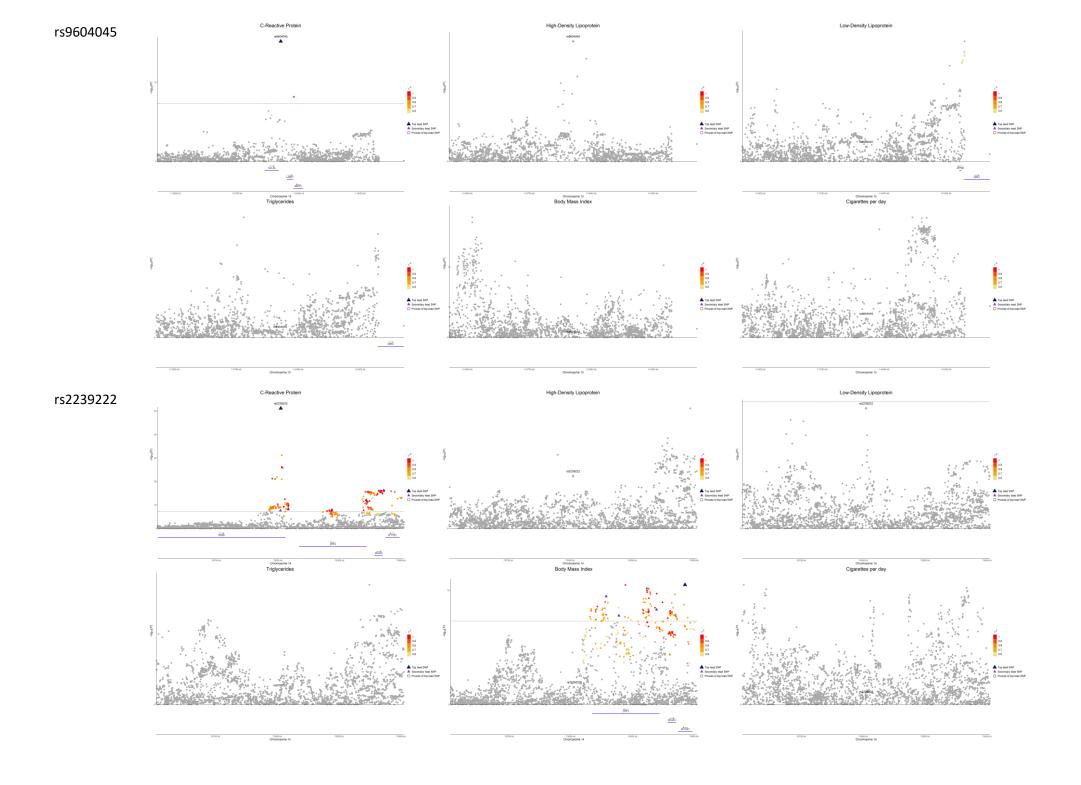


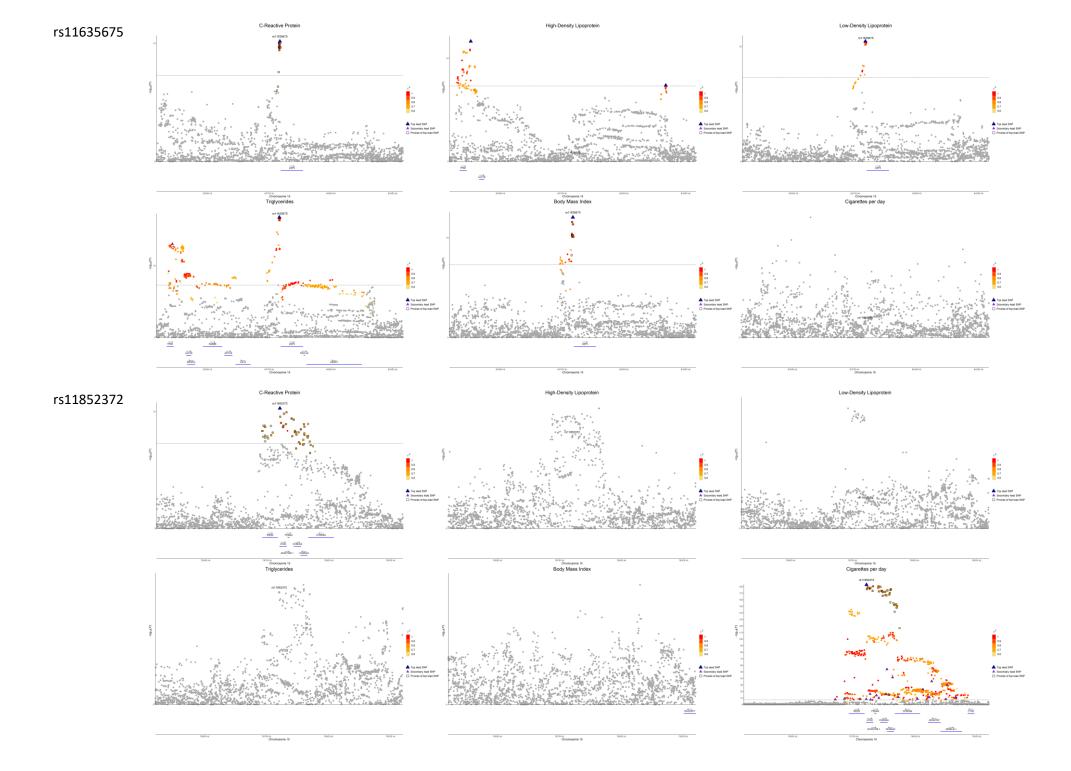


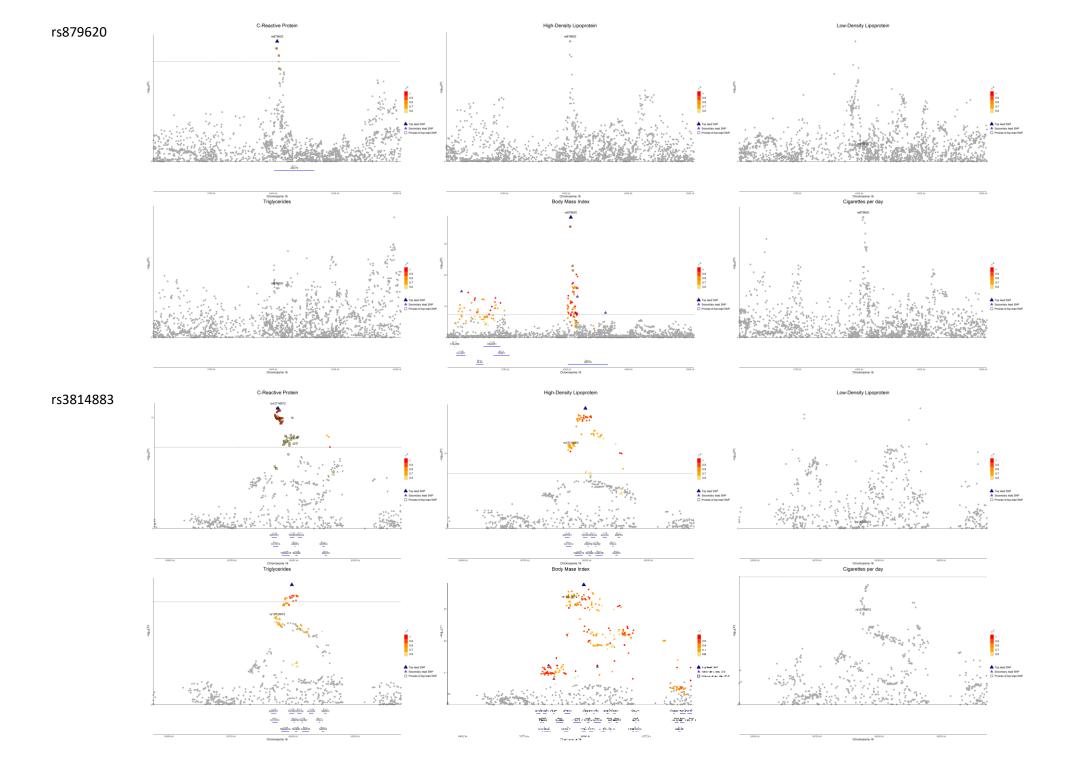


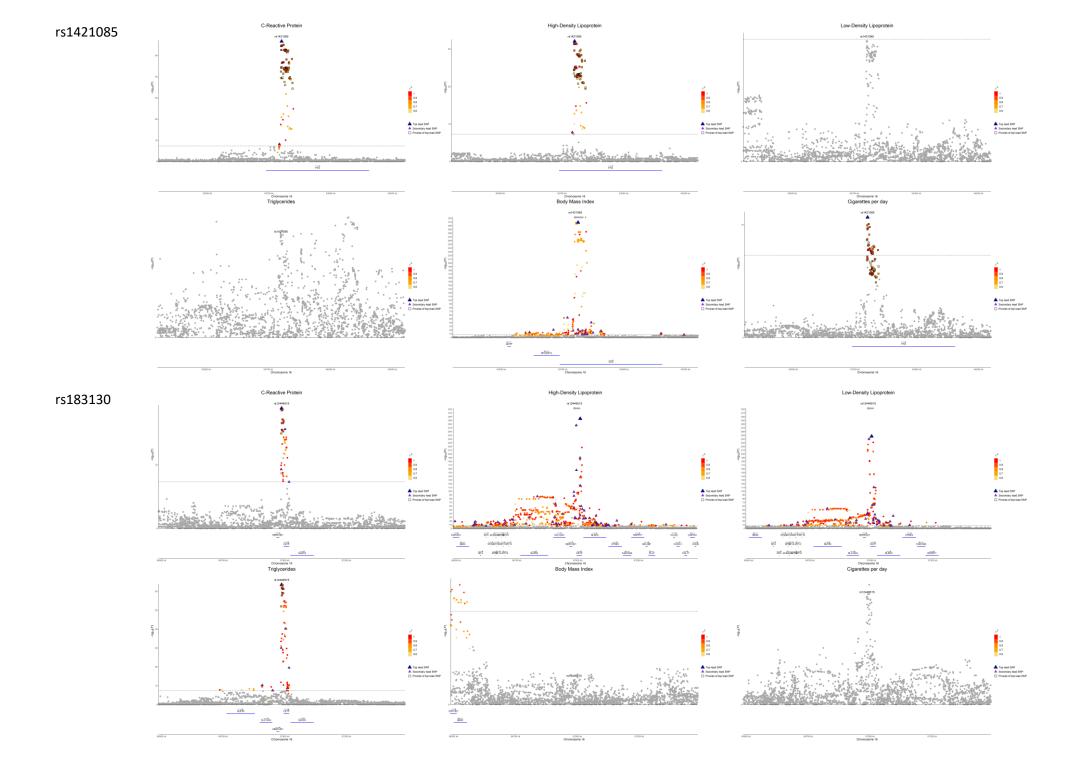


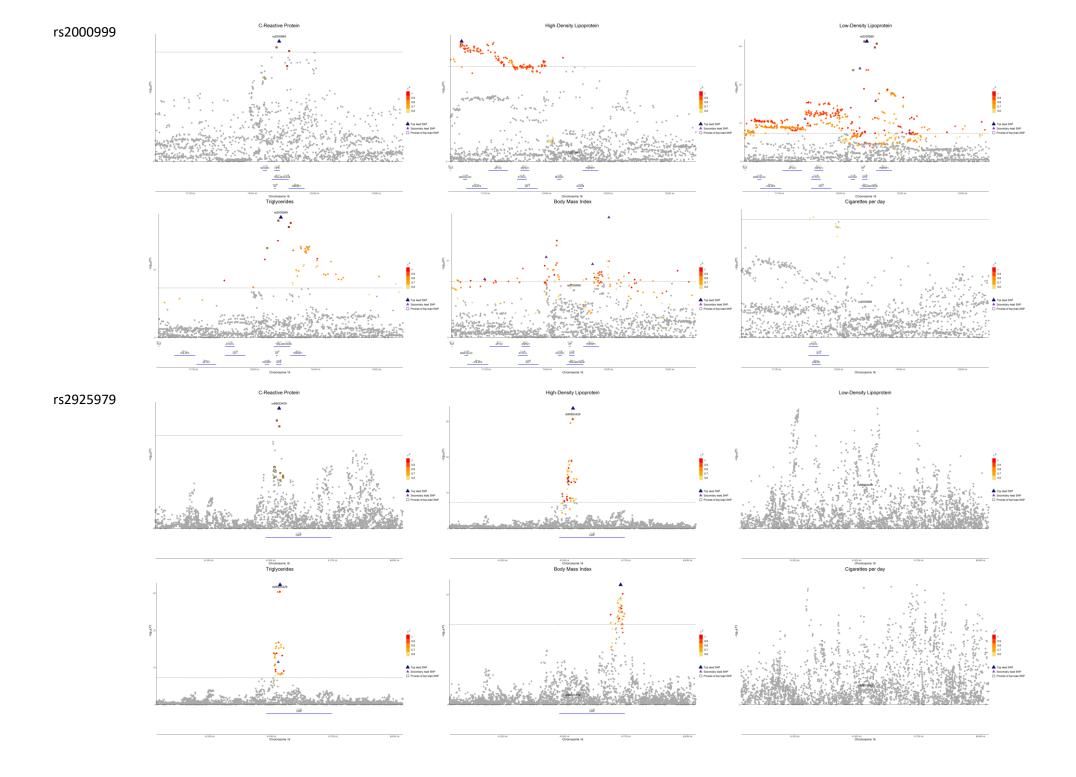


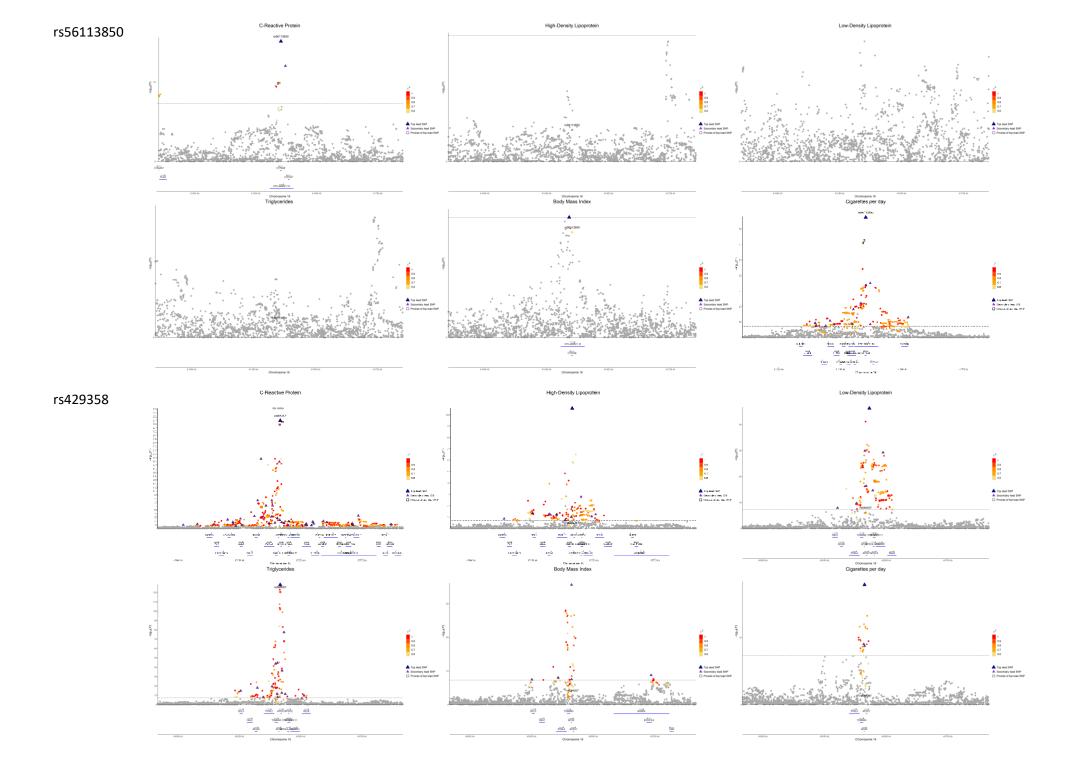


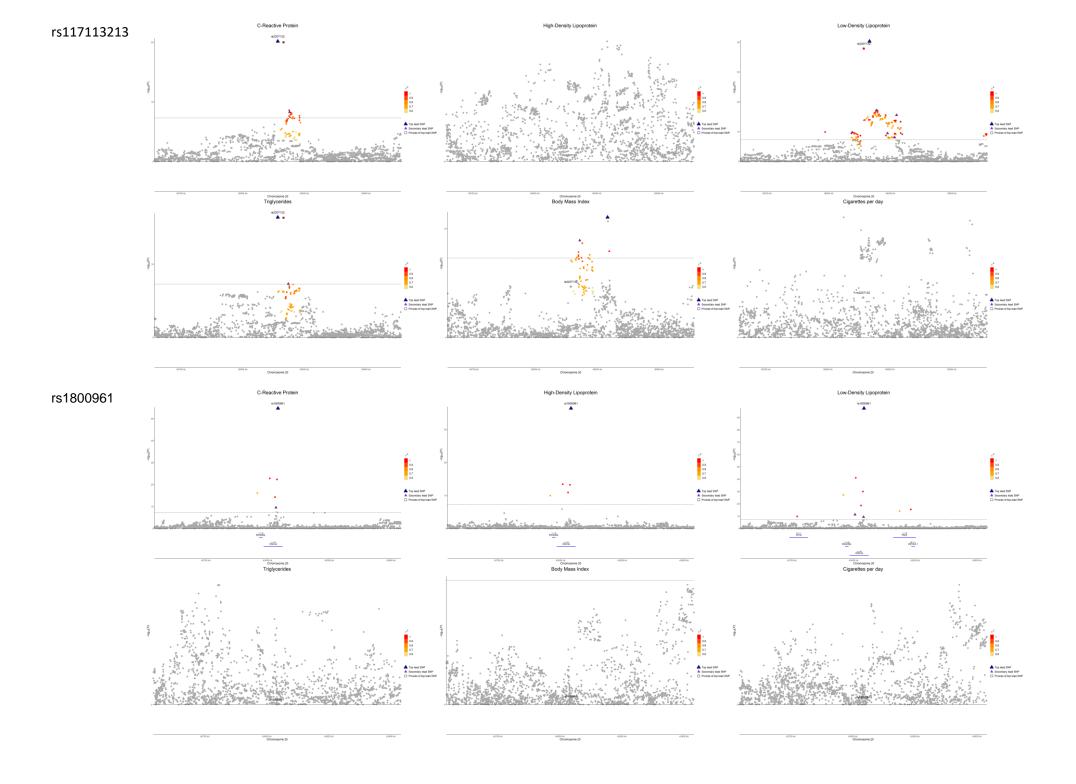


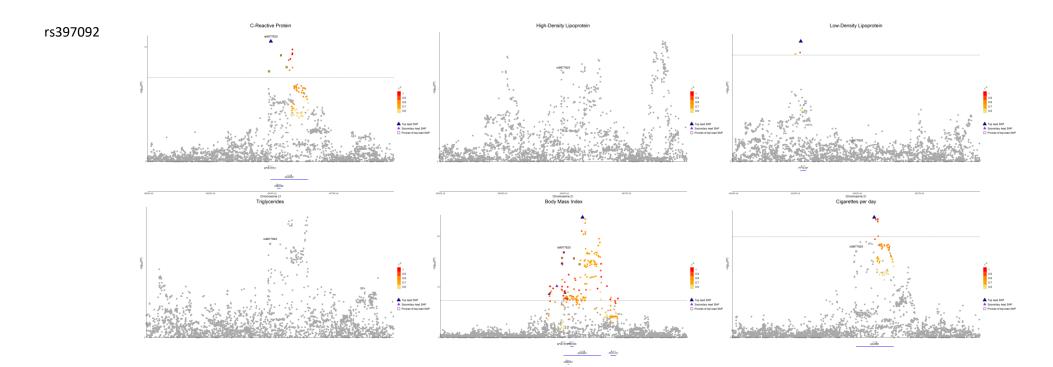












Supplementary Figure 7 Regional plots of the 41 loci found to colocalize between C-Reactive Protein levels (CRP) and any of the other examined traits: High-Density Lipoprotein (HDL), Low-Density Lipoprotein (LDL), Triglycerides (TG), Body Mass Index (BMI), and Cigarettes per day (CPD). The P-values come from two-sided statistical tests.