

Description of Additional Supplementary Files

File Name: Supplementary Data 1

Description: Significant trait-gene associations

File Name: Supplementary Data 2

Description: Significant gene-trait associations

File Name: Supplementary Data 3

Description: DAVID results for triglycerides

File Name: Supplementary Data 4

Description: DAVID results for Rheumatoid arthritis

File Name: Supplementary Data 5

Description: Description of genes affected by lipid traits

File Name: Supplementary Data 6

Description: Weighted Median and weighted Mode-MR results for the 51 trait-gene associations found by revTWMR

File Name: Supplementary Data 7

Description: Weighted Median and weighted Mode-MR significant results missed by revTWMR

File Name: Supplementary Data 8

Description: DAVID results for RA (revTWMR + MR-mode and -median based significant genes)

File Name: Supplementary Data 9

Description: PheWAS results for rs2456973

File Name: Supplementary Data 10

Description: Gene perturbation and genetic correlations

File Name: Supplementary Data 11

Description: Correlation between observational correlation pvalues and gene-based test pvalues

File Name: Supplementary Data 12

Description: Proportion of observational correlation explained by TWMR, revTWMR and confounders

File Name: Supplementary Data 13

Description: Drug targets analysis

File Name: Supplementary Data 14

Description: Tissue-specific trait->gene associations

File Name: Supplementary Data 15

Description: Fisher test for enrichment of significant genes in mice data

File Name: Supplementary Data 16

Description: Summary Statistics of the GWASs