

# **Exome-Wide Association Study Identified Clusters of Pleiotropic Genetic Associations with Alzheimer's Disease and Thirteen Cardiovascular Traits**

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## Supplementary Materials Listing

Supplementary materials include two Figures and three Tables:

**Figure S1.** Pearson's correlation coefficients between 17 considered traits, which represent cardiovascular and Alzheimer's disease risk factors in the UK Biobank.

**Figure S2.** Clusters of 13 traits and 13 SNPs based on Pearson's correlation coefficients as a distance measure as implemented in R function *pheatmap* from the R package *ecodist*.

**Table S1.** Pearson's correlation coefficients [%] between 17 considered traits, which represent cardiovascular and Alzheimer's disease risk factors in the UK Biobank.

**Table S2:** Univariate and pleiotropic associations of 13 SNPs in the *APOE* gene cluster and the other 4 gene loci, which demonstrated genome-wide significance of pair-wise pleiotropic associations with Alzheimer's disease and at least one of the 16 traits.

**Table S3:** (A) Patterns/clusters of pleiotropic associations of 13 SNPs in the *APOE* gene region and the other 4 gene loci, which demonstrated genome-wide significance of pair-wise pleiotropic associations with Alzheimer's disease and at least one of 16 traits. (B) Matrix *A* that was used in the cluster analysis.

## Supplementary Figures

**Figure S1.** Pearson's correlation coefficients between 17 considered traits, which represent cardiovascular and Alzheimer's disease risk factors in the UK Biobank.



**Figure S2.** Clusters of 13 traits and 13 SNPs based on Pearson's correlation coefficients as a distance measure as implemented in R function *pheatmap* from the R package *ecodist*.

