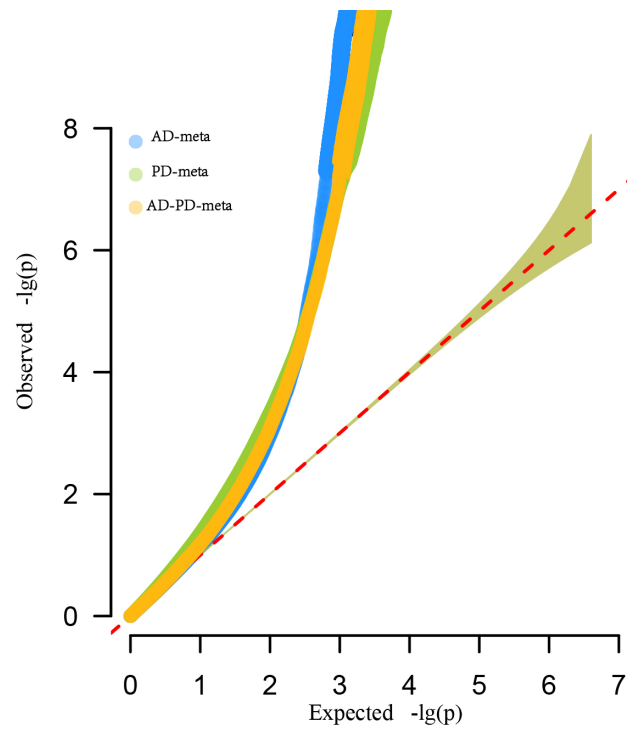
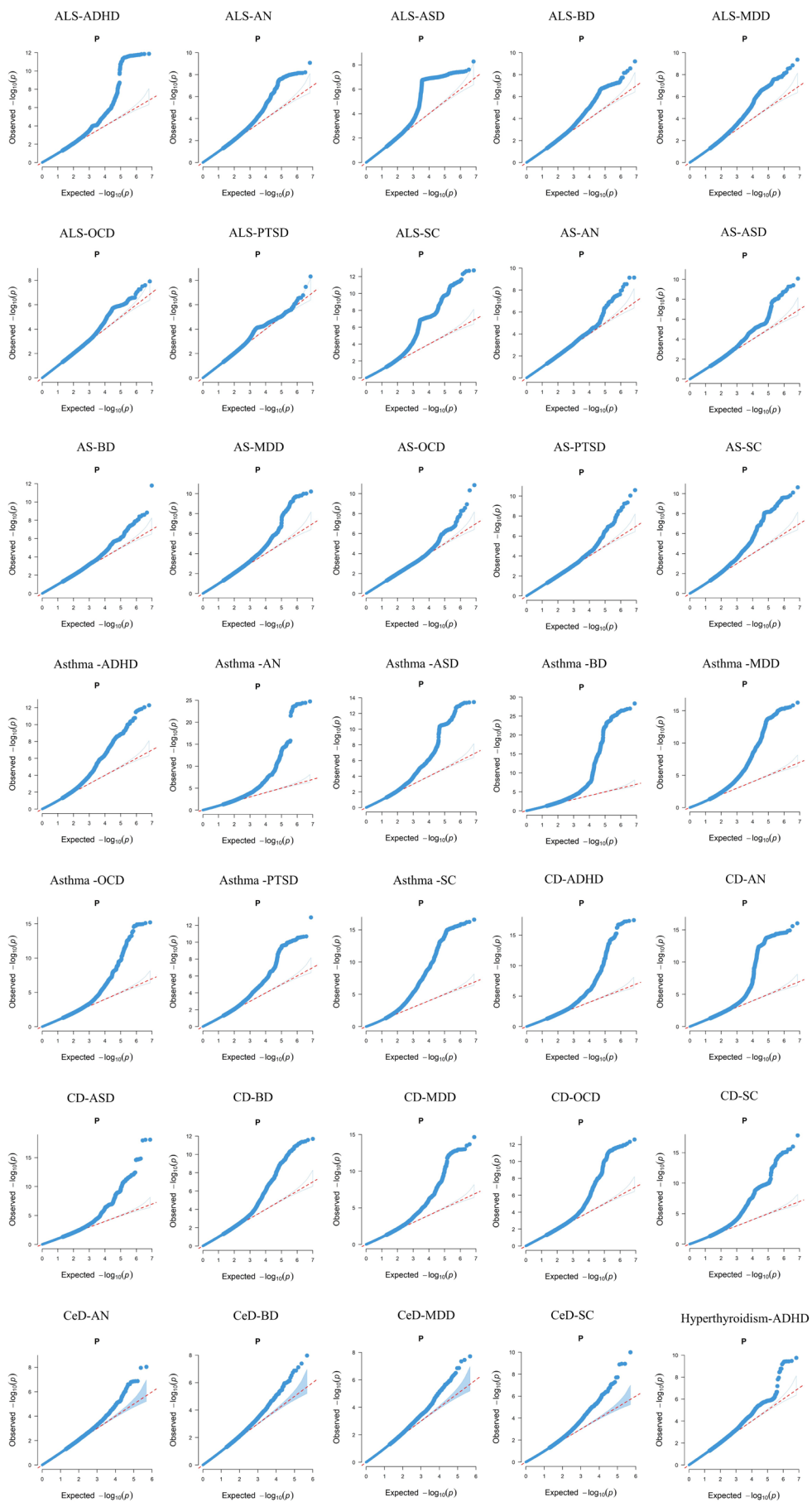
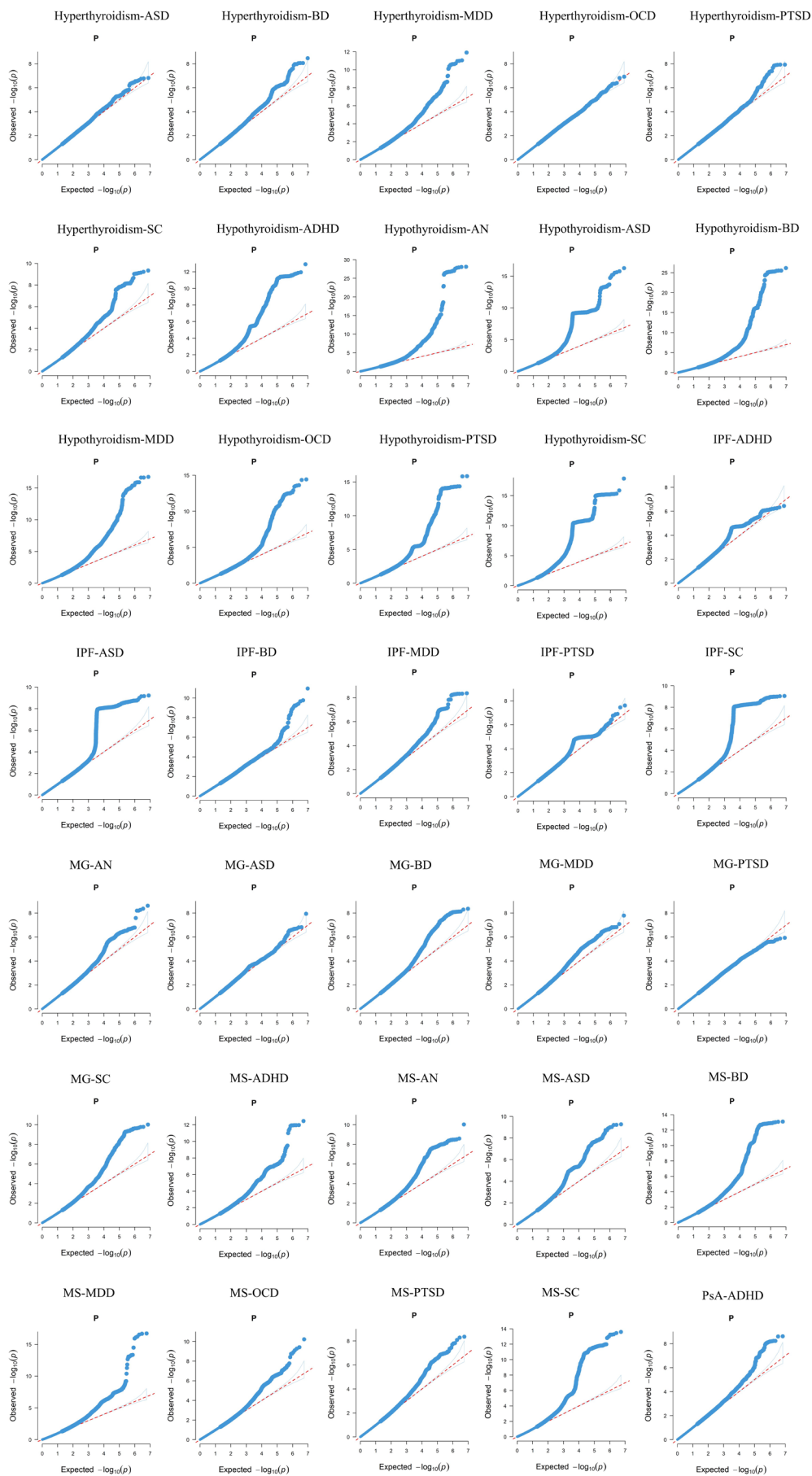
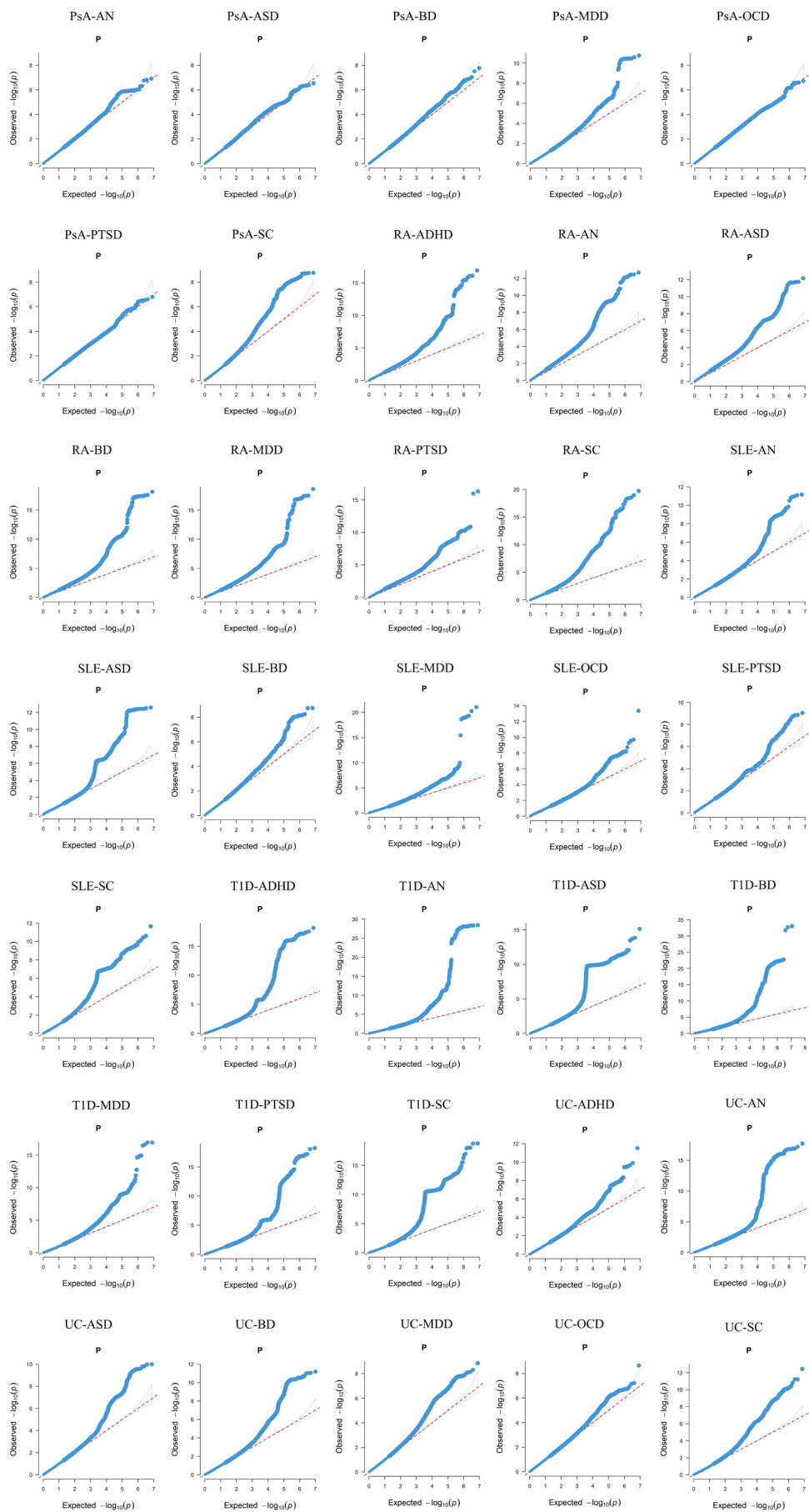


A**B**

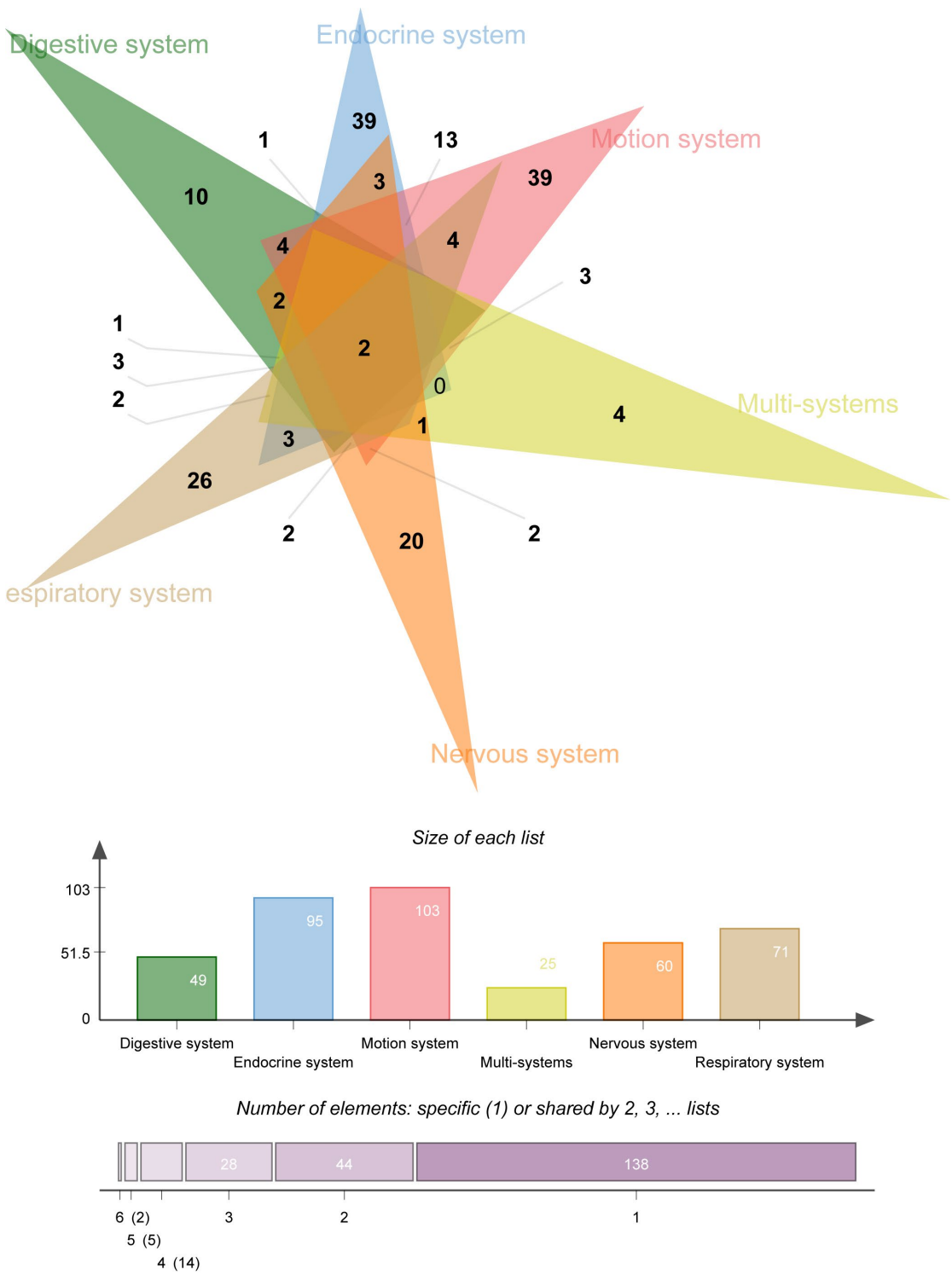
Supplementary Figure 1. A. Circular Manhattan Plot of meta-analysis. B. Quantile-Quantile (Q-Q) Plots of meta-analysis.



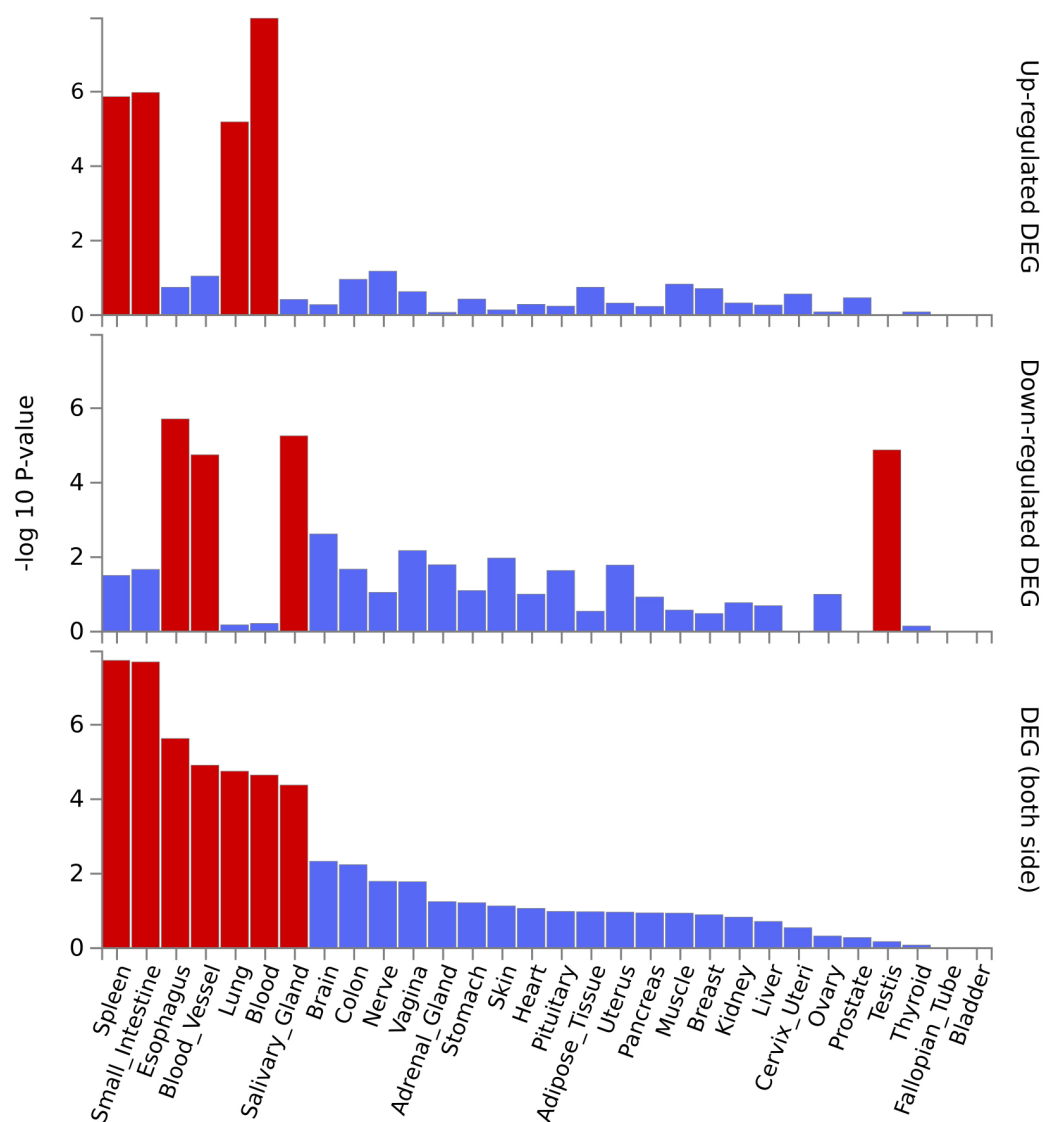




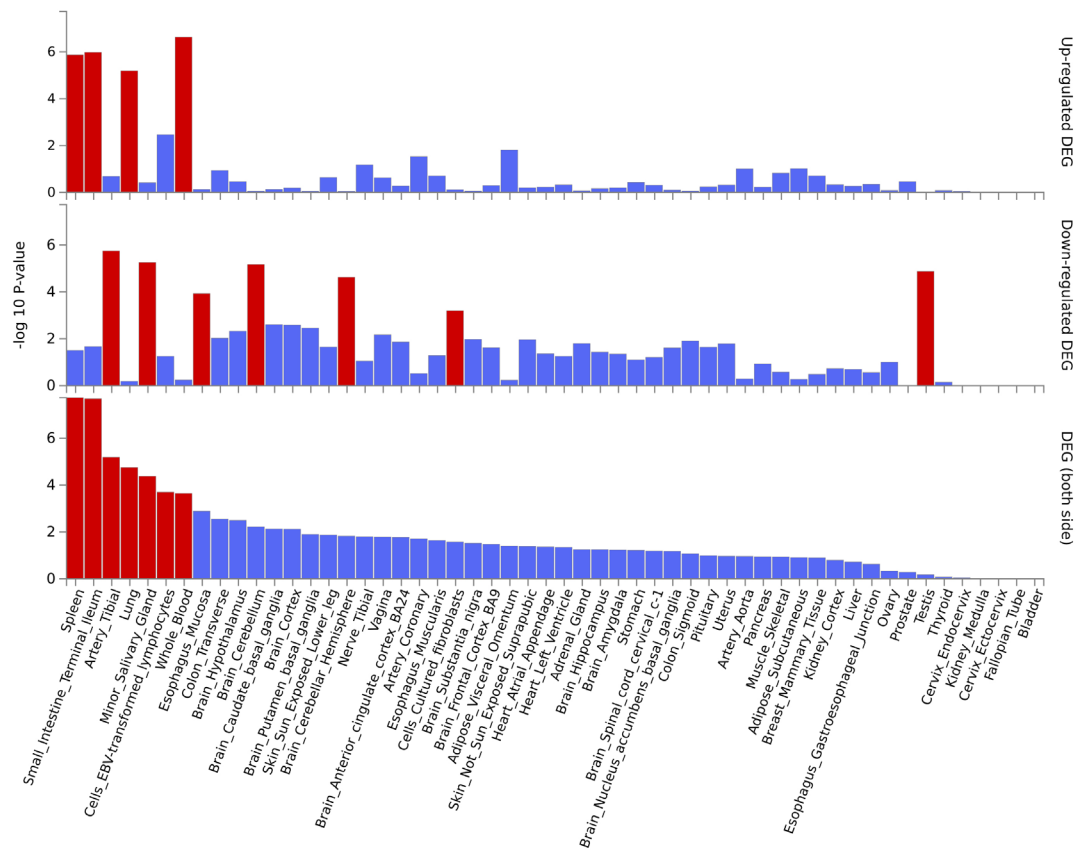
Supplementary Figure 2. Q-Q Plots of PLACO Results for 105 Pairwise Traits



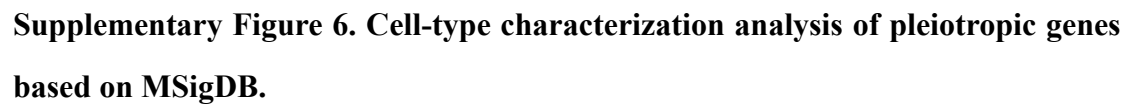
Supplementary Figure 3. The plot illustrates the distribution of pleiotropic loci, identified through FUMA analysis, across traits associated with autoimmune diseases and psychiatric disorders in various systems.



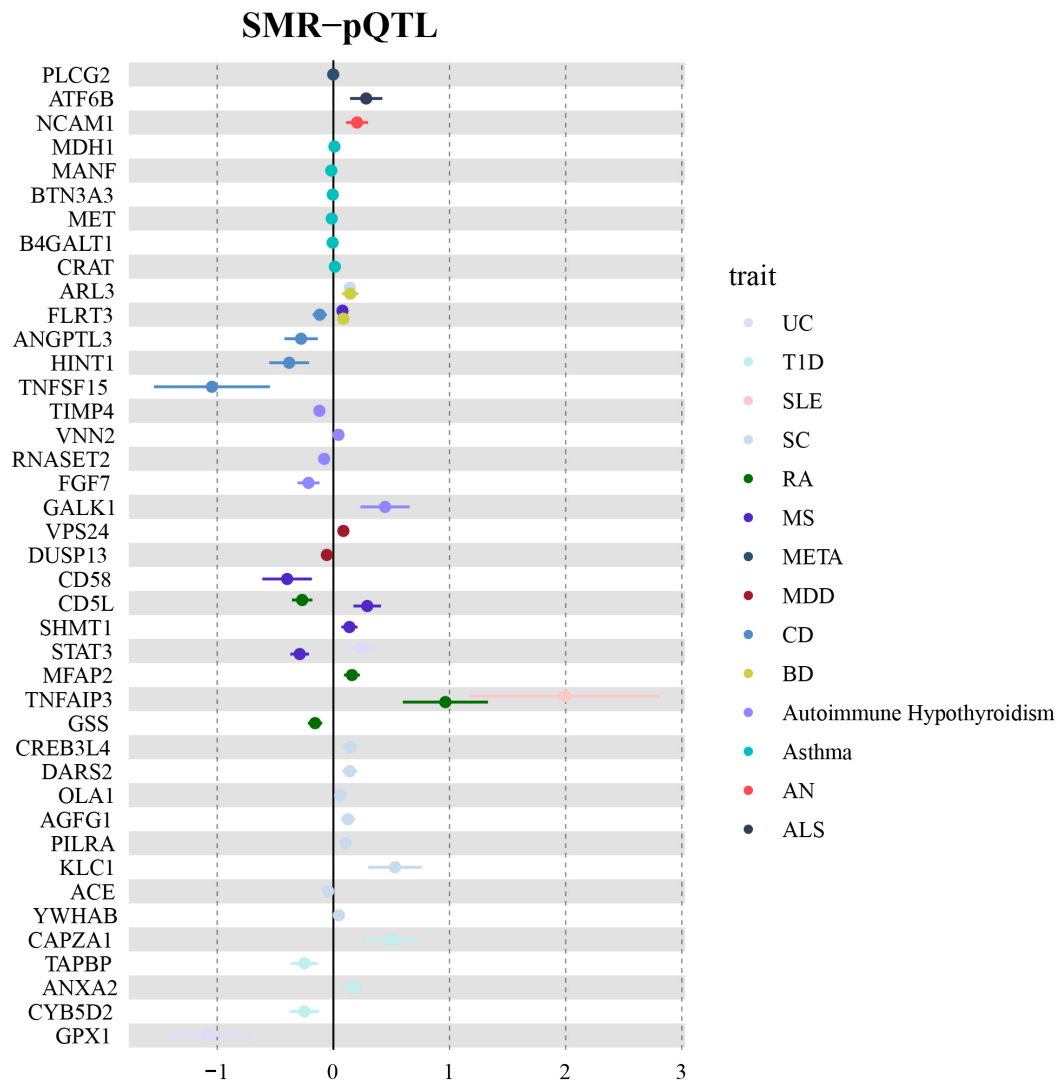
Supplementary Figure 4. Using deTS analysis based on ENCODE, significant enrichments with Bonferroni-corrected P-values ≤ 0.05 are highlighted in red.



Supplementary Figure 5. Using deTS analysis based on GTEx, significant enrichments with Bonferroni-corrected P-values ≤ 0.05 are highlighted in red.



Supplementary Figure 6. Cell-type characterization analysis of pleiotropic genes based on MSigDB.



Supplementary Figure 7. SMR analysis based on pQTL yielded 41 plasma proteins associated with autoimmune diseases or psychiatric disorders.