



**Supplementary Figure 4: Comparative enrichment analysis between RLEA by GaiaAssociation and GREGOR. GaiaAssociation performance was compared against**

GREGOR using ATAC-seq regions from 44 cell types and the GWAS studies highlighted in **Figure 2b**. While there was a general concordance of enrichment for cell type rankings between the methods, GREGOR tended to show a non-specific enrichment in significance across most or all cell types, whereas GaiaAssociation was generally more selective, especially for the ADHD, ASD, and Intellectual impairment results in **(a)** and the schizophrenia results in **(b)**.