

# ***Supplementary Figures 1 - 2***

## **Druggable transcriptomic pathways revealed in Parkinson's patient-derived midbrain neurons**

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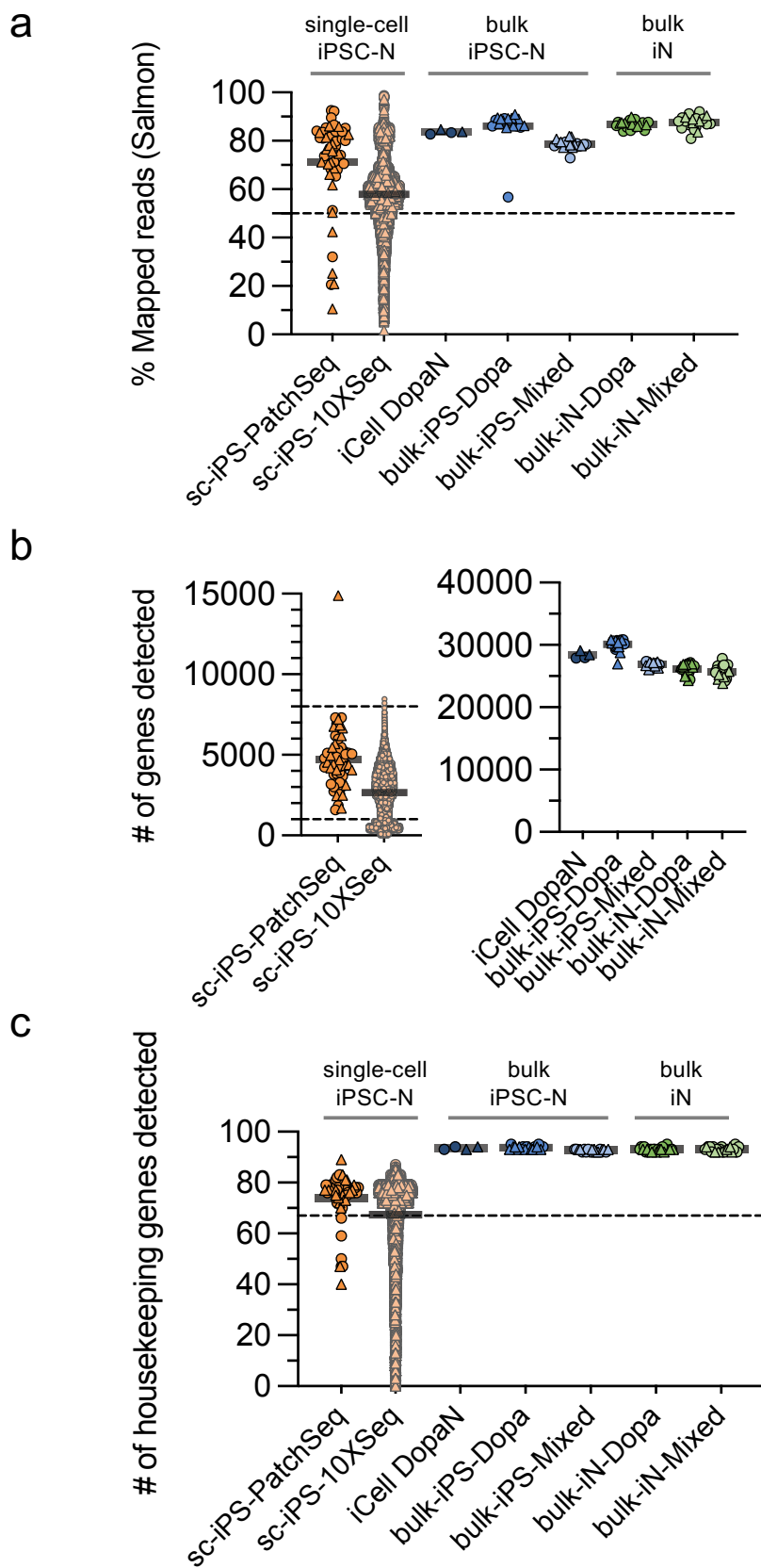
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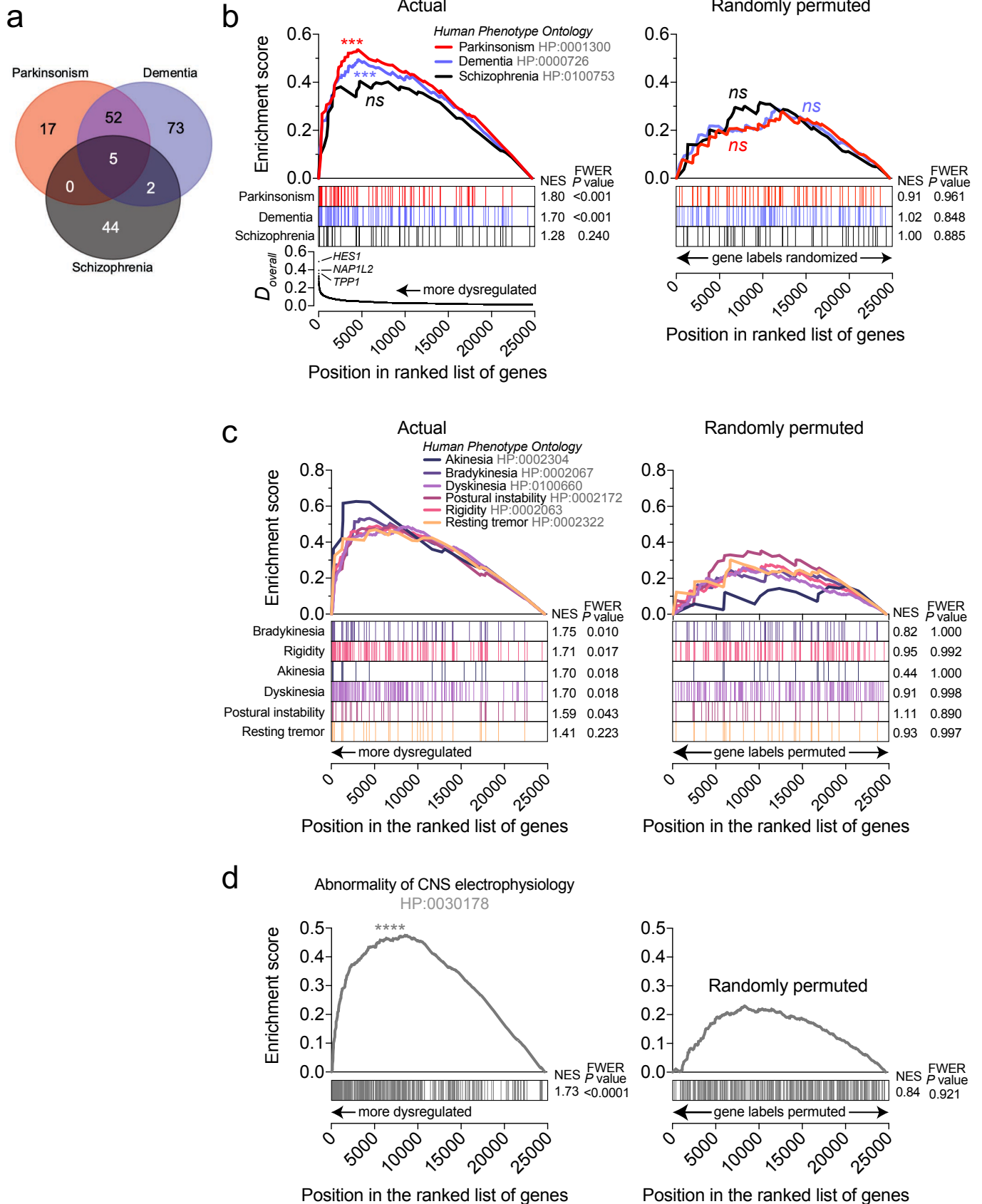
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**Supplementary Figure 1.** Quality control metrics (percentage of mapped reads (a), number of genes detected (b) and number of housekeeping genes expressed (c)) for each single-cell or bulk RNA-seq library. Horizontal dotted lines indicate critical thresholds for sample inclusion/exclusion (refer to Methods for details).



**Supplementary Figure 2.** **a** Venn analysis of genes annotated to the Human Phenotype Ontologies for Parkinsonism, Dementia and Schizophrenia reveals substantial overlap between parkinsonism and dementia genes. **b-d** Significant associations of the dysregulated PD transcriptome with Parkinsonism (**b**), PD clinical symptoms ontology (**c**) and abnormality of central nervous system electrophysiology (**d**) is completely abolished upon random permutation of gene labels, effectively destroying the gene-dysregulation score relationship.