

## **Description of Additional Supplementary Files:**

**Supplementary Data 1:** presents the evaluation scores for all the methods used on the dIPFC dataset.

**Supplementary Data 2:** provides a list of the top 100 differentially expressed genes within clusters from the human dIPFC sample 151671.

**Supplementary Data 3:** provides a list of Gene Ontology (GO) terms enriched in cluster A-11 within the dIPFC sample 151671.

**Supplementary Data 4:** provides a list of the top 100 differentially expressed genes within clusters from the human M1C dataset.