

GeDiPNet Shared-Gene Disease Pairs

Similarity: Jaccard index on shared curated genes (disease\_gdp). Significance: upper-tail hypergeometric test ( $P(X \geq k)$ ), Benjamini-Hochberg FDR-corrected across all tested pairs. Corroborated Shared Genes: count of shared genes backed by  $\geq 2$  distinct disease\_gdp.main\_source values combined across both diseases (e.g. GWAS-backed for one, ClinVar-backed for the other still counts); Shared Gene Names lists each gene's own source count in parentheses. Overlap Coefficient: shared genes / MIN(each disease's own total gene count) -- complements the Jaccard-based Similarity Score by showing how much of the SMALLER disease's entire known gene-set is covered by this pair, which Jaccard (dividing by the union) can understate. Shared Cluster: cluster id if both diseases fall in the same label-propagation cluster (scripts/build\_disease\_clusters.php), blank otherwise. See scripts/build\_related.php on gedipnet.bicnirrh.res.in. Data as of: 2026-10-20 03:00:20. Filters applied: disease name contains "Neurodevelopmental disorder with hypotonia, microcephaly, and seizures" (5 matching pairs). · Rows: 5 · Generated: 2026-10-20 04:20:09

| Disease A                                                              | Disease B                                                              | Shared Genes | Corroborated Shared Genes | Shared Gene Names     | Similarity Score | Overlap Coefficient | P-value  | FDR Q-value | Shared Cluster |
|------------------------------------------------------------------------|------------------------------------------------------------------------|--------------|---------------------------|-----------------------|------------------|---------------------|----------|-------------|----------------|
| Microcephaly, intellectual disability, and seizures                    | Neurodevelopmental disorder with hypotonia, microcephaly, and seizures | 1            | 0                         | ADARB1 (1)            | 0.25000          | 0.50000             | 2.583e-4 | 5.384e-4    |                |
| Neurodevelopmental disorder                                            | Neurodevelopmental disorder with hypotonia, microcephaly, and seizures | 2            | 1                         | ADARB1 (5), JKAMP (1) | 0.00199          | 1.00000             | 4.215e-3 | 5.153e-3    |                |
| Neurodevelopmental disorder with hypotonia, microcephaly, and seizures | Psychotic disorders                                                    | 1            | 1                         | ADARB1 (2)            | 0.00787          | 0.50000             | 1.608e-2 | 1.748e-2    |                |
| Neurodevelopmental disorder with hypotonia, microcephaly, and seizures | Polycystic ovary syndrome                                              | 1            | 1                         | ADARB1 (3)            | 0.00437          | 0.50000             | 2.910e-2 | 3.061e-2    |                |
| Gastresophageal reflux disease                                         | Neurodevelopmental disorder with hypotonia, microcephaly, and seizures | 1            | 1                         | ADARB1 (2)            | 0.00356          | 0.50000             | 3.570e-2 | 3.737e-2    |                |