

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 "Abnormal brain morphology" (5 matching pairs). · Rows: 5 · Generated: 2026-10-20 07:58:02

| Disease A                 | Disease B                | Shared Genes | Corroborated Shared Genes | Shared Gene Names | Similarity Score | Overlap Coefficient | P-value  | FDR Q-value | Shared Cluster |
|---------------------------|--------------------------|--------------|---------------------------|-------------------|------------------|---------------------|----------|-------------|----------------|
| Abnormal brain morphology | Hygroma                  | 1            | 0                         | WDR91 (1)         | 0.33333          | 1.00000             | 1.291e-4 | 3.269e-4    |                |
| Abnormal brain morphology | Neurodevelopmental delay | 1            | 0                         | WDR91 (1)         | 0.12500          | 0.50000             | 7.747e-4 | 1.247e-3    |                |
| Abnormal brain morphology | Hydrocephalus            | 1            | 0                         | WDR91 (1)         | 0.02941          | 0.50000             | 4.128e-3 | 5.056e-3    |                |
| Abnormal brain morphology | Ciliopathy               | 1            | 1                         | LRRC45 (3)        | 0.01205          | 0.50000             | 1.043e-2 | 1.162e-2    |                |
| Abnormal brain morphology | Neuroblastoma            | 1            | 1                         | LRRC45 (2)        | 0.00375          | 0.50000             | 3.393e-2 | 3.559e-2    |                |