

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: 2026-10-12 03:00:13. Filters applied: disease name contains "Autism-epilepsy syndrome" (5 matching pairs). · Rows: 5 · Generated: 2026-10-12 04:05:55

| Disease A                | Disease B                                                | Shared Genes | Corroborated Shared Genes | Shared Gene Names | Similarity Score | Overlap Coefficient | P-value  | FDR Q-value | Shared Cluster |
|--------------------------|----------------------------------------------------------|--------------|---------------------------|-------------------|------------------|---------------------|----------|-------------|----------------|
| Autism                   | Autism-epilepsy syndrome                                 | 1            | 1                         | BCKDK (2)         | 0.00068          | 1.00000             | 9.501e-2 | 9.603e-2    |                |
| Autism-epilepsy syndrome | Intellectual developmental disorder                      | 1            | 1                         | BCKDK (2)         | 0.00123          | 1.00000             | 5.254e-2 | 5.421e-2    |                |
| Autism-epilepsy syndrome | Parkinson disease                                        | 1            | 1                         | BCKDK (2)         | 0.00189          | 1.00000             | 3.436e-2 | 3.633e-2    |                |
| Autism-epilepsy syndrome | Maple syrup urine disease                                | 1            | 1                         | BCKDK (2)         | 0.12500          | 1.00000             | 4.546e-4 | 9.726e-4    |                |
| Autism-epilepsy syndrome | Branched-chain keto acid dehydrogenase kinase deficiency | 1            | 1                         | BCKDK (6)         | 0.50000          | 1.00000             | 6.494e-5 | 2.331e-4    |                |