

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: 2026-10-10 03:00:13. Filters applied: disease name contains "amyotrophic lateral sclerosis, susceptibility to, 25" (5 matching pairs). · Rows: 5 · Generated: 2026-10-10 08:32:24

| Disease A                                            | Disease B                                                             | Shared Genes | Corroborated Shared Genes | Shared Gene Names | Similarity Score | Overlap Coefficient | P-value  | FDR Q-value | Shared Cluster |
|------------------------------------------------------|-----------------------------------------------------------------------|--------------|---------------------------|-------------------|------------------|---------------------|----------|-------------|----------------|
| amyotrophic lateral sclerosis, susceptibility to, 25 | Auditory neuropathy                                                   | 1            | 1                         | KIF5A (2)         | 0.03125          | 1.00000             | 2.013e-3 | 2.901e-3    |                |
| amyotrophic lateral sclerosis, susceptibility to, 25 | Dyskinesia                                                            | 1            | 1                         | KIF5A (2)         | 0.03704          | 1.00000             | 1.689e-3 | 2.531e-3    |                |
| amyotrophic lateral sclerosis, susceptibility to, 25 | Frontotemporal dementia with or without amyotrophic lateral sclerosis | 1            | 1                         | KIF5A (2)         | 0.07692          | 1.00000             | 7.793e-4 | 1.405e-3    |                |
| amyotrophic lateral sclerosis, susceptibility to, 25 | Genetic neurodegenerative disease                                     | 1            | 1                         | KIF5A (2)         | 0.25000          | 1.00000             | 1.948e-4 | 5.354e-4    |                |
| amyotrophic lateral sclerosis, susceptibility to, 25 | inherited neurodegenerative disorder                                  | 1            | 0                         | KIF5A (1)         | 0.50000          | 1.00000             | 6.494e-5 | 2.331e-4    |                |