

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 "retinal dystrophy, optic nerve edema, splenomegaly, anhidrosis, and migraine headache syndrome" (5 matching pairs). · Rows: 5 · Generated: 2026-10-10 01:40:55

| Disease A           | Disease B                                                                                      | Shared Genes | Corroborated Shared Genes | Shared Gene Names | Similarity Score | Overlap Coefficient | P-value  | FDR Q-value | Shared Cluster |
|---------------------|------------------------------------------------------------------------------------------------|--------------|---------------------------|-------------------|------------------|---------------------|----------|-------------|----------------|
| Diabetic neuropathy | retinal dystrophy, optic nerve edema, splenomegaly, anhidrosis, and migraine headache syndrome | 1            | 1                         | ALPK1 (3)         | 0.00426          | 1.00000             | 1.520e-2 | 1.679e-2    |                |
| Eye disease         | retinal dystrophy, optic nerve edema, splenomegaly, anhidrosis, and migraine headache syndrome | 1            | 1                         | ALPK1 (2)         | 0.01053          | 1.00000             | 6.105e-3 | 7.341e-3    | 399            |
| Gouty arthritis     | retinal dystrophy, optic nerve edema, splenomegaly, anhidrosis, and migraine headache syndrome | 1            | 1                         | ALPK1 (2)         | 0.06250          | 1.00000             | 9.742e-4 | 1.665e-3    |                |
| Nephrosclerosis     | retinal dystrophy, optic nerve edema, splenomegaly, anhidrosis, and migraine headache syndrome | 1            | 1                         | ALPK1 (3)         | 0.06667          | 1.00000             | 9.092e-4 | 1.576e-3    |                |
| Corneal ulcer       | retinal dystrophy, optic nerve edema, splenomegaly, anhidrosis, and migraine headache syndrome | 1            | 1                         | ALPK1 (2)         | 0.10000          | 1.00000             | 5.845e-4 | 1.156e-3    | 399            |