

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 "Dominant retinopathy" (6 matching pairs). · Rows: 6 · Generated: 2026-10-20 06:31:52

| Disease A                                   | Disease B                                       | Shared Genes | Corroborated Shared Genes | Shared Gene Names                                               | Similarity Score | Overlap Coefficient | P-value   | FDR Q-value | Shared Cluster |
|---------------------------------------------|-------------------------------------------------|--------------|---------------------------|-----------------------------------------------------------------|------------------|---------------------|-----------|-------------|----------------|
| Benign concentric annular macular dystrophy | Dominant retinopathy                            | 1            | 1                         | IMPG1 (4)                                                       | 0.12500          | 1.00000             | 4.520e-4  | 8.260e-4    |                |
| Dominant retinopathy                        | Retinitis pigmentosa with choroidal involvement | 1            | 1                         | RPE65 (6)                                                       | 0.12500          | 1.00000             | 4.520e-4  | 8.260e-4    |                |
| Dominant retinopathy                        | Retinal dystrophy                               | 2            | 2                         | RPE65 (2), SNRNP200 (2)                                         | 0.08696          | 0.28571             | 2.374e-5  | 1.237e-4    |                |
| Congenital blindness                        | Dominant retinopathy                            | 2            | 2                         | GUCY2D (2), RPE65 (2)                                           | 0.22222          | 0.66667             | 5.252e-7  | 3.320e-6    |                |
| Dominant retinopathy                        | Stargardt disease                               | 4            | 4                         | PROM1 (7), RPE65 (2), SNRNP200 (2), RDH12 (2)                   | 0.12500          | 0.57143             | 2.979e-10 | 2.687e-9    |                |
| Dominant retinopathy                        | Recessive retinopathy                           | 6            | 0                         | IMPG1 (1), GUCY2D (1), PROM1 (1), RP1 (1), RPE65 (1), RDH12 (1) | 0.66667          | 0.85714             | 2.558e-21 | 3.906e-20   |                |