

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: 2026-10-11 03:00:14. Filters applied: disease name contains "Paroxysmal atrial fibrillation" (5 matching pairs). · Rows: 5 · Generated: 2026-10-11 02:16:21

| Disease A                              | Disease B                      | Shared Genes | Corroborated Shared Genes | Shared Gene Names       | Similarity Score | Overlap Coefficient | P-value  | FDR Q-value | Shared Cluster |
|----------------------------------------|--------------------------------|--------------|---------------------------|-------------------------|------------------|---------------------|----------|-------------|----------------|
| Concentric hypertrophic cardiomyopathy | Paroxysmal atrial fibrillation | 1            | 0                         | MYBPC3 (1)              | 0.14286          | 0.33333             | 7.792e-4 | 1.405e-3    |                |
| Jervell and lange-nielsen syndrome     | Paroxysmal atrial fibrillation | 1            | 1                         | KCNQ1 (7)               | 0.16667          | 0.50000             | 5.195e-4 | 1.061e-3    |                |
| Cardiovascular abnormalities           | Paroxysmal atrial fibrillation | 2            | 0                         | KCNQ1 (1), MYBPC3 (1)   | 0.14286          | 0.50000             | 2.782e-6 | 1.505e-5    |                |
| Paroxysmal atrial fibrillation         | Short qt syndrome              | 2            | 2                         | KCNQ1 (6), CACNA2D1 (2) | 0.14286          | 0.50000             | 2.782e-6 | 1.505e-5    |                |
| Congenital short qt syndrome           | Paroxysmal atrial fibrillation | 2            | 2                         | KCNQ1 (2), CACNA2D1 (2) | 0.25000          | 0.50000             | 5.060e-7 | 3.140e-6    |                |