

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: 2026-10-09 03:00:13. Filters applied: disease name contains "Hypertension and brachydactyly syndrome" (5 matching pairs). · Rows: 5 · Generated: 2026-10-09 18:06:50

| Disease A                               | Disease B                               | Shared Genes | Corroborated Shared Genes | Shared Gene Names | Similarity Score | Overlap Coefficient | P-value  | FDR Q-value | Shared Cluster |
|-----------------------------------------|-----------------------------------------|--------------|---------------------------|-------------------|------------------|---------------------|----------|-------------|----------------|
| Brachydactyly with hypertension         | Hypertension and brachydactyly syndrome | 1            | 1                         | PDE3A (4)         | 0.50000          | 1.00000             | 6.494e-5 | 2.329e-4    |                |
| Eye neoplasms                           | Hypertension and brachydactyly syndrome | 1            | 1                         | PDE3A (2)         | 0.07692          | 1.00000             | 7.793e-4 | 1.405e-3    |                |
| Brachydactyly                           | Hypertension and brachydactyly syndrome | 1            | 1                         | PDE3A (3)         | 0.04545          | 1.00000             | 1.364e-3 | 2.147e-3    |                |
| Hypertension and brachydactyly syndrome | Thrombosis                              | 1            | 1                         | PDE3A (2)         | 0.02174          | 1.00000             | 2.922e-3 | 3.875e-3    |                |
| Hypertension and brachydactyly syndrome | Hypogonadism                            | 1            | 1                         | PDE3A (2)         | 0.01299          | 1.00000             | 4.936e-3 | 6.051e-3    |                |