

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 "HMGB1-related brachyphalangy, polydactyly and tibial aplasia syndrome" (5 matching pairs). · Rows: 5 · Generated: 2026-10-10 01:39:46

| Disease A                                                             | Disease B                                                             | Shared Genes | Corroborated Shared Genes | Shared Gene Names | Similarity Score | Overlap Coefficient | P-value  | FDR Q-value | Shared Cluster |
|-----------------------------------------------------------------------|-----------------------------------------------------------------------|--------------|---------------------------|-------------------|------------------|---------------------|----------|-------------|----------------|
| Brachyphalangy polydactyly tibial aplasia hypoplasia syndrome         | HMGB1-related brachyphalangy, polydactyly and tibial aplasia syndrome | 1            | 1                         | HMGB1 (2)         | 0.50000          | 1.00000             | 6.494e-5 | 2.331e-4    |                |
| HMGB1-related brachyphalangy, polydactyly and tibial aplasia syndrome | Sepsis                                                                | 1            | 1                         | HMGB1 (3)         | 0.02857          | 1.00000             | 2.208e-3 | 3.113e-3    |                |
| HMGB1-related brachyphalangy, polydactyly and tibial aplasia syndrome | Necrosis                                                              | 1            | 1                         | HMGB1 (2)         | 0.01786          | 1.00000             | 3.572e-3 | 4.594e-3    |                |
| Aortic stenosis                                                       | HMGB1-related brachyphalangy, polydactyly and tibial aplasia syndrome | 1            | 1                         | HMGB1 (2)         | 0.01639          | 1.00000             | 3.897e-3 | 4.941e-3    |                |
| HMGB1-related brachyphalangy, polydactyly and tibial aplasia syndrome | Hyperalgesia                                                          | 1            | 1                         | HMGB1 (2)         | 0.01111          | 1.00000             | 5.780e-3 | 6.997e-3    |                |