

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: 2026-10-12 03:00:13. Filters applied: disease name contains "Congenital phimosis" (5 matching pairs). · Rows: 5 · Generated: 2026-10-11 22:22:22

| Disease A                                                                                | Disease B                                                                                  | Shared Genes | Corroborated Shared Genes | Shared Gene Names | Similarity Score | Overlap Coefficient | P-value  | FDR Q-value | Shared Cluster |
|------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|--------------|---------------------------|-------------------|------------------|---------------------|----------|-------------|----------------|
| Anemia                                                                                   | Congenital phimosis                                                                        | 1            | 0                         | ITGA3 (1)         | 0.01176          | 1.00000             | 5.455e-3 | 6.632e-3    |                |
| Bronchopulmonary dysplasia                                                               | Congenital phimosis                                                                        | 1            | 0                         | ITGA3 (1)         | 0.02174          | 1.00000             | 2.922e-3 | 3.876e-3    |                |
| Congenital phimosis                                                                      | Junctional epidermolysis bullosa                                                           | 1            | 1                         | ITGA3 (7)         | 0.05263          | 1.00000             | 1.169e-3 | 1.895e-3    |                |
| Congenital nephrotic syndrome, interstitial lung disease, epidermolysis bullosa syndrome | Congenital phimosis                                                                        | 1            | 0                         | ITGA3 (1)         | 0.50000          | 1.00000             | 6.494e-5 | 2.331e-4    |                |
| Congenital phimosis                                                                      | epidermolysis bullosa, junctional 7, with interstitial lung disease and nephrotic syndrome | 1            | 1                         | ITGA3 (2)         | 0.50000          | 1.00000             | 6.494e-5 | 2.331e-4    |                |