

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 "Multiple synostoses syndrome" (6 matching pairs). · Rows: 6 · Generated: 2026-10-10 02:14:54

| Disease A                                  | Disease B                                   | Shared Genes | Corroborated Shared Genes | Shared Gene Names | Similarity Score | Overlap Coefficient | P-value  | FDR Q-value | Shared Cluster |
|--------------------------------------------|---------------------------------------------|--------------|---------------------------|-------------------|------------------|---------------------|----------|-------------|----------------|
| Angel-shaped phalangoeipiphyseal dysplasia | Multiple synostoses syndrome                | 1            | 1                         | GDF5 (6)          | 0.20000          | 1.00000             | 2.598e-4 | 6.509e-4    |                |
| Multiple synostoses syndrome               | Proximal symphalangism                      | 1            | 1                         | NOG (4)           | 0.20000          | 1.00000             | 2.598e-4 | 6.509e-4    |                |
| Multiple synostoses syndrome               | NOG-related symphalangism spectrum disorder | 1            | 1                         | NOG (5)           | 0.20000          | 1.00000             | 2.598e-4 | 6.509e-4    |                |
| Hemimelia of limb                          | Multiple synostoses syndrome                | 1            | 1                         | NOG (4)           | 0.16667          | 0.50000             | 5.195e-4 | 1.061e-3    |                |
| Congenital cystic eyeball                  | Multiple synostoses syndrome                | 1            | 1                         | GDF6 (5)          | 0.10000          | 0.25000             | 1.558e-3 | 2.376e-3    |                |
| Klippel-feil syndrome                      | Multiple synostoses syndrome                | 1            | 1                         | GDF6 (6)          | 0.09091          | 0.25000             | 1.817e-3 | 2.677e-3    |                |