

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 "Alpha-n-acetylgalactosaminidase deficiency" (3 matching pairs). · Rows: 3 · Generated: 2026-10-11 07:48:01

| Disease A                                  | Disease B                          | Shared Genes | Corroborated Shared Genes | Shared Gene Names | Similarity Score | Overlap Coefficient | P-value  | FDR Q-value | Shared Cluster |
|--------------------------------------------|------------------------------------|--------------|---------------------------|-------------------|------------------|---------------------|----------|-------------|----------------|
| Alpha-n-acetylgalactosaminidase deficiency | Arthrogryposis multiplex congenita | 1            | 1                         | NAGA (4)          | 0.01370          | 1.00000             | 4.676e-3 | 5.787e-3    |                |
| Alpha-n-acetylgalactosaminidase deficiency | Pena-shokeir syndrome              | 1            | 1                         | NAGA (4)          | 0.01887          | 1.00000             | 3.377e-3 | 4.374e-3    |                |
| Alpha-n-acetylgalactosaminidase deficiency | Schindler disease                  | 1            | 1                         | NAGA (5)          | 0.50000          | 1.00000             | 6.494e-5 | 2.331e-4    |                |