

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: 2026-10-14 03:00:13. Filters applied: disease name contains "Thiamine metabolism dysfunction syndrome" (5 matching pairs). · Rows: 5 · Generated: 2026-10-14 12:09:56

| Disease A                    | Disease B                                | Shared Genes | Corroborated Shared Genes | Shared Gene Names      | Similarity Score | Overlap Coefficient | P-value  | FDR Q-value | Shared Cluster |
|------------------------------|------------------------------------------|--------------|---------------------------|------------------------|------------------|---------------------|----------|-------------|----------------|
| Leigh syndrome               | Thiamine metabolism dysfunction syndrome | 2            | 2                         | SLC25A19 (4), TPK1 (4) | 0.01852          | 1.00000             | 4.784e-5 | 2.166e-4    |                |
| Amish lethal microcephaly    | Thiamine metabolism dysfunction syndrome | 1            | 1                         | SLC25A19 (6)           | 0.33333          | 1.00000             | 1.299e-4 | 3.931e-4    |                |
| Microcephaly                 | Thiamine metabolism dysfunction syndrome | 1            | 1                         | SLC25A19 (3)           | 0.00926          | 0.50000             | 1.372e-2 | 1.528e-2    |                |
| Lymphocytic leukemia         | Thiamine metabolism dysfunction syndrome | 1            | 1                         | TPK1 (4)               | 0.00855          | 0.50000             | 1.488e-2 | 1.650e-2    |                |
| Systemic lupus erythematosus | Thiamine metabolism dysfunction syndrome | 1            | 1                         | SLC25A19 (3)           | 0.00152          | 0.50000             | 8.314e-2 | 8.429e-2    |                |