

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 "Circadian rhythm sleep disorder" (5 matching pairs). · Rows: 5 · Generated: 2026-10-10 16:35:06

| Disease A                       | Disease B             | Shared Genes | Corroborated Shared Genes | Shared Gene Names | Similarity Score | Overlap Coefficient | P-value  | FDR Q-value | Shared Cluster |
|---------------------------------|-----------------------|--------------|---------------------------|-------------------|------------------|---------------------|----------|-------------|----------------|
| Circadian rhythm sleep disorder | Pernicious anemia     | 1            | 0                         | CNTN5 (1)         | 0.09091          | 0.33333             | 1.558e-3 | 2.376e-3    |                |
| Circadian rhythm sleep disorder | Splenic disease       | 1            | 0                         | CNTN5 (1)         | 0.08333          | 0.33333             | 1.753e-3 | 2.609e-3    |                |
| Circadian rhythm sleep disorder | Diabetic ketoacidosis | 1            | 0                         | CNTN5 (1)         | 0.02632          | 0.33333             | 6.804e-3 | 8.082e-3    |                |
| Circadian rhythm sleep disorder | Hyperuricemia         | 1            | 0                         | CNTN5 (1)         | 0.01493          | 0.33333             | 1.242e-2 | 1.389e-2    |                |
| Circadian rhythm sleep disorder | Large artery stroke   | 1            | 0                         | CNTN5 (1)         | 0.01235          | 0.33333             | 1.512e-2 | 1.674e-2    |                |