

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 "Hypertryptophanemia" (5 matching pairs). · Rows: 5 · Generated: 2026-10-10 06:22:23

| Disease A           | Disease B             | Shared Genes | Corroborated Shared Genes | Shared Gene Names | Similarity Score | Overlap Coefficient | P-value  | FDR Q-value | Shared Cluster |
|---------------------|-----------------------|--------------|---------------------------|-------------------|------------------|---------------------|----------|-------------|----------------|
| Hypertryptophanemia | Non-organic psychosis | 1            | 1                         | TDO2 (6)          | 0.01429          | 1.00000             | 4.481e-3 | 5.604e-3    |                |
| Hypertryptophanemia | Psychotic disorders   | 1            | 1                         | TDO2 (6)          | 0.00794          | 1.00000             | 8.118e-3 | 9.424e-3    |                |
| Hypertryptophanemia | Tourette syndrome     | 1            | 1                         | TDO2 (6)          | 0.00386          | 1.00000             | 1.676e-2 | 1.839e-2    |                |
| Depression          | Hypertryptophanemia   | 1            | 1                         | TDO2 (6)          | 0.00357          | 1.00000             | 1.812e-2 | 1.980e-2    |                |
| Bipolar disorder    | Hypertryptophanemia   | 1            | 1                         | TDO2 (6)          | 0.00082          | 1.00000             | 7.923e-2 | 8.034e-2    |                |