

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 "hypomagnesemia, seizures, and intellectual disability 1" (5 matching pairs). · Rows: 5 · Generated: 2026-10-10 13:39:37

| Disease A                                               | Disease B                        | Shared Genes | Corroborated Shared Genes | Shared Gene Names | Similarity Score | Overlap Coefficient | P-value  | FDR Q-value | Shared Cluster |
|---------------------------------------------------------|----------------------------------|--------------|---------------------------|-------------------|------------------|---------------------|----------|-------------|----------------|
| hypomagnesemia, seizures, and intellectual disability 1 | Obstructive sleep apnea syndrome | 1            | 1                         | CNNM2 (2)         | 0.01220          | 1.00000             | 5.260e-3 | 6.419e-3    |                |
| hypomagnesemia, seizures, and intellectual disability 1 | Large artery stroke              | 1            | 1                         | CNNM2 (2)         | 0.01266          | 1.00000             | 5.066e-3 | 6.202e-3    |                |
| hypomagnesemia, seizures, and intellectual disability 1 | Moyamoya angiopathy              | 1            | 1                         | CNNM2 (2)         | 0.02703          | 1.00000             | 2.338e-3 | 3.243e-3    |                |
| hypomagnesemia, seizures, and intellectual disability 1 | Magnesium metabolism disorder    | 1            | 1                         | CNNM2 (2)         | 0.16667          | 1.00000             | 3.247e-4 | 7.709e-4    | 341            |
| hypomagnesemia, seizures, and intellectual disability 1 | Tetany                           | 1            | 1                         | CNNM2 (2)         | 0.50000          | 1.00000             | 6.494e-5 | 2.331e-4    | 341            |