

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 ≥ 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 "Combined immunodeficiency and megaloblastic anemia with or without hyperhomocysteinemia" (6 matching pairs). · Rows: 6 · Generated: 2026-10-10 08:32:28

Disease A	Disease B	Shared Genes	Corroborated Shared Genes	Shared Gene Names	Similarity Score	Overlap Coefficient	P-value	FDR Q-value	Shared Cluster
Combined immunodeficiency and megaloblastic anemia with or without hyperhomocysteinemia	Down syndrome	1	1	MTHFD1 (5)	0.04762	0.50000	2.466e-3	3.371e-3	
Cardiac valvular dysplasia	Combined immunodeficiency and megaloblastic anemia with or without hyperhomocysteinemia	1	1	MTHFD1 (5)	0.12500	0.50000	7.792e-4	1.405e-3	
Combined immunodeficiency and megaloblastic anemia with or without hyperhomocysteinemia	Neural tube defects, folate-sensitive	1	1	MTHFD1 (5)	0.16667	0.50000	5.195e-4	1.061e-3	
Combined immunodeficiency and megaloblastic anemia with or without hyperhomocysteinemia	Combined immunodeficiency-megaloblastic anemia due to methylenetetrahydrofolate dehydrogenase 1 deficiency	1	1	MTHFD1 (6)	0.33333	1.00000	1.299e-4	3.931e-4	
Combined immunodeficiency and megaloblastic anemia with or without hyperhomocysteinemia	Severe combined immunodeficiency	2	1	ZBTB25 (1), MTHFD1 (5)	0.03846	1.00000	1.076e-5	5.301e-5	
Combined immunodeficiency and megaloblastic anemia with or without hyperhomocysteinemia	Neural tube defect	2	1	ZBTB25 (1), MTHFD1 (5)	0.04082	1.00000	9.516e-6	4.722e-5	