

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: 2026-10-11 03:00:14. Filters applied: disease name contains "Partial adenosine deaminase deficiency" (5 matching pairs). · Rows: 5 · Generated: 2026-10-11 03:05:29

| Disease A                              | Disease B                                                                                                                                        | Shared Genes | Corroborated Shared Genes | Shared Gene Names | Similarity Score | Overlap Coefficient | P-value  | FDR Q-value | Shared Cluster |
|----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|--------------|---------------------------|-------------------|------------------|---------------------|----------|-------------|----------------|
| Partial adenosine deaminase deficiency | Severe combined immunodeficiency                                                                                                                 | 2            | 1                         | PKIG (1), ADA (7) | 0.03846          | 1.00000             | 1.076e-5 | 5.301e-5    |                |
| Partial adenosine deaminase deficiency | Pelvic organ prolapse                                                                                                                            | 2            | 2                         | PKIG (2), ADA (2) | 0.01429          | 1.00000             | 8.091e-5 | 2.890e-4    |                |
| Partial adenosine deaminase deficiency | severe combined immunodeficiency, autosomal recessive, T cell-negative, B cell-negative, NK cell-negative, due to adenosine deaminase deficiency | 1            | 1                         | ADA (2)           | 0.33333          | 1.00000             | 1.299e-4 | 3.931e-4    |                |
| Omenn syndrome                         | Partial adenosine deaminase deficiency                                                                                                           | 1            | 1                         | ADA (3)           | 0.08333          | 0.50000             | 1.298e-3 | 2.063e-3    |                |
| Hyperemia                              | Partial adenosine deaminase deficiency                                                                                                           | 1            | 1                         | ADA (2)           | 0.06250          | 0.50000             | 1.818e-3 | 2.677e-3    |                |