

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: 2026-10-20 03:00:20. Filters applied: disease name contains "Pulmonary disease" (43 matching pairs). · Rows: 43 · Generated: 2026-10-20 03:39:12

Disease A	Disease B	Shared Genes	Corroborated Shared Genes	Shared Gene Names	Similarity Score	Overlap Coefficient	P-value	FDR Q-value	Shared Cluster
Mountain sickness	Obstructive pulmonary disease	1	0	AEBP2 (1)	0.00178	0.50000	7.088e-2	7.214e-2	
Obstructive pulmonary disease	Young syndrome	1	1	CFAP221 (3)	0.00179	1.00000	3.609e-2	3.775e-2	
Obstructive pulmonary disease	Van den ende-gupta syndrome	1	1	SCARF2 (2)	0.00179	1.00000	3.609e-2	3.775e-2	
Obstructive pulmonary disease	Suleiman-el-hattab syndrome	1	1	TASP1 (2)	0.00179	1.00000	3.609e-2	3.775e-2	
Obstructive pulmonary disease	Seckel syndrome 10	1	1	NSMCE2 (3)	0.00179	1.00000	3.609e-2	3.775e-2	
Obstructive pulmonary disease	Poikiloderma with neutropenia	1	1	USB1 (2)	0.00179	1.00000	3.609e-2	3.775e-2	
Neurodevelopmental disorder with spasticity, seizures, and brain abnormalities	Obstructive pulmonary disease	1	1	NSRP1 (3)	0.00179	1.00000	3.609e-2	3.775e-2	
Neurodegeneration, early-onset, with choreoathetoid movements and microcytic anemia	Obstructive pulmonary disease	1	1	IREB2 (2)	0.00179	1.00000	3.609e-2	3.775e-2	
Neurocardiofaciodigital syndrome	Obstructive pulmonary disease	1	1	MAPKAPK5 (2)	0.00179	1.00000	3.609e-2	3.775e-2	
Myopathy, centronuclear, 5	Obstructive pulmonary disease	1	1	SPEG (3)	0.00179	1.00000	3.609e-2	3.775e-2	
Macrocephaly, dysmorphic facies, and psychomotor retardation	Obstructive pulmonary disease	1	1	HERC1 (2)	0.00179	1.00000	3.609e-2	3.775e-2	49
Hexosaminidase activator deficiency	Obstructive pulmonary disease	1	1	GM2A (2)	0.00179	1.00000	3.609e-2	3.775e-2	
Erythrocyte amp deaminase deficiency	Obstructive pulmonary disease	1	1	AMPD3 (5)	0.00179	1.00000	3.609e-2	3.775e-2	
Dmgdh deficiency	Obstructive pulmonary disease	1	1	DMGDH (2)	0.00179	1.00000	3.609e-2	3.775e-2	
Dimethylglycine dehydrogenase deficiency	Obstructive pulmonary disease	1	1	DMGDH (7)	0.00179	1.00000	3.609e-2	3.775e-2	
B-cell immunodeficiency, distal limb anomalies, and urogenital malformations	Obstructive pulmonary disease	1	1	TOP2B (3)	0.00179	1.00000	3.609e-2	3.775e-2	
Developmental delay, epilepsy, and microcephaly	Obstructive pulmonary disease	1	1	NSRP1 (2)	0.00179	1.00000	3.609e-2	3.775e-2	

Disease A	Disease B	Shared Genes	Corroborated Shared Genes	Shared Gene Names	Similarity Score	Overlap Coefficient	P-value	FDR Q-value	Shared Cluster
Ciliary dyskinesia, primary, 42	Obstructive pulmonary disease	1	1	MCIDAS (3)	0.00179	1.00000	3.609e-2	3.775e-2	
Colobomatous macrophthalmia microcornea syndrome	Obstructive pulmonary disease	1	1	CRIM1 (3)	0.00179	1.00000	3.609e-2	3.775e-2	
Congenital disorder of glycosylation with defective fucosylation 1	Obstructive pulmonary disease	1	1	FUT8 (3)	0.00179	1.00000	3.609e-2	3.775e-2	
Epilepsy	Pulmonary disease	1	1	HPS4 (2)	0.00365	1.00000	1.763e-2	1.903e-2	
Interstitial lung disease	Pulmonary disease	1	1	HPS4 (2)	0.01449	1.00000	4.390e-3	5.339e-3	
Generalized epilepsy	Pulmonary disease	1	1	HPS4 (2)	0.01515	1.00000	4.197e-3	5.132e-3	
Chronic obstructive pulmonary disease	Neurodevelopmental disorder with progressive spasticity and brain abnormalities	1	1	EEFSEC (2)	0.02381	1.00000	2.647e-3	3.413e-3	
Chronic obstructive pulmonary disease	Susceptibility to respiratory infections associated with CD8alpha chain mutation	1	1	CD8A (2)	0.02381	1.00000	2.647e-3	3.413e-3	174
Chronic obstructive pulmonary disease	Rheumatoid arthritis, systemic juvenile, susceptibility to	1	1	MIF (2)	0.02381	1.00000	2.647e-3	3.413e-3	
Hermansky-pudlak syndrome	Pulmonary disease	1	1	HPS4 (8)	0.08333	1.00000	7.102e-4	1.174e-3	
Hermansky-pudlak syndrome 4	Pulmonary disease	1	1	HPS4 (2)	0.50000	1.00000	6.457e-5	1.985e-4	
Chronic obstructive pulmonary disease	Oral submucous fibrosis	5	4	TNF (2), IL6 (2), TGFB1 (2), MMP9 (2), CXCL8 (1)	0.08772	0.25000	1.521e-9	1.296e-8	
Dental caries	Obstructive pulmonary disease	31	1	ASCC2 (1), GLIS3 (1), HLA-DQA1 (1), HLA-DRB5 (1), IP6K1 (1), MTMR3 (1), OR5V1 (1), PDZD2 (1), RARB (1), RBMS3 (1), TCF7L2 (1), THSD4 (1)	0.04079	0.13420	2.732e-10	2.468e-9	49
Diverticular disease	Obstructive pulmonary disease	34	2	RREB1 (1), ARHGEF28 (1), ICA1L (1), MAML3 (1), MAPKAP1 (1), MMS22L (1), SCARA5 (1), SLC35F3 (2), TBX5 (1), TRPS1 (1), VAPA (1), EFEMP1 (1)	0.04393	0.13710	2.019e-11	1.994e-10	
Chronic obstructive pulmonary disease	Cystic fibrosis	9	8	SERPINA1 (3), NOS3 (2), AGER (1), HMOX1 (4), TNF (2), EPHX1 (2), TGFB1 (5), CYP1A1 (2), MIF (3)	0.09474	0.21951	4.567e-14	5.262e-13	174
Chronic obstructive pulmonary disease	Sepsis	8	8	NOS3 (2), TLR4 (2), TNF (2), IL6 (2), TGFB1 (2), MMP9 (2), NOS2 (2), MIF (2)	0.11765	0.23529	2.014e-14	2.371e-13	
Obstructive pulmonary disease	Open angle glaucoma	49	5	HMGA2 (1), RERE (1), ZFPM2 (1), ANTXR1 (1), APOE (2), BCAS3 (1), BNC2 (1), CADM2 (1), CCDC91 (1), COL6A3 (2), DGKB (1), GLIS3 (1)	0.05562	0.13243	2.479e-15	3.030e-14	
Irritable bowel syndrome	Obstructive pulmonary disease	30	0	RERE (1), RREB1 (1), ASCC2 (1), CADM2 (1), CELF4 (1), EMSY (1), FOXP2 (1), GLIS3 (1), HEYL (1), HLA-C (1), MECOM (1), MPHOSPH9 (1)	0.04518	0.22388	5.378e-16	6.771e-15	
Androgenetic alopecia	Obstructive pulmonary disease	53	0	KANSL1 (1), CASZ1 (1), RERE (1), RREB1 (1), HDAC4 (1), FGFR3 (1), AFF3 (1), CCDC91 (1), FADS2 (1), GLIS3 (1), HDAC9 (1), L3MBTL3 (1)	0.05792	0.12990	3.871e-16	4.902e-15	
Chronic obstructive pulmonary disease	Pulmonary fibrosis	12	12	SERPINA1 (2), HMOX1 (2), TNF (2), IL6 (2), DSP (3), ELN (2), TGFB1 (2), MMP9 (2), CXCL8 (2), CXCL2 (2), FAM13A (2), SOD3 (2)	0.08759	0.29268	4.192e-17	5.534e-16	174

Disease A	Disease B	Shared Genes	Corroborated Shared Genes	Shared Gene Names	Similarity Score	Overlap Coefficient	P-value	FDR Q-value	Shared Cluster
Inflammatory bowel disease	Obstructive pulmonary disease	84	6	WVVOX (1), ATP2A2 (1), AFF3 (1), ASCC2 (1), ATP8B4 (1), BSN (1), DCBLD1 (1), EMSY (1), ERBB3 (1), FADS1 (1), FADS2 (1), FOXP2 (1)	0.07179	0.15027	3.929e-23	6.347e-22	
Obstructive pulmonary disease	Respiratory system disease	51	0	RERE (1), RREB1 (1), EMSY (1), FADS1 (1), FADS2 (1), GABBR1 (1), HLA-DQA1 (1), ITGB8 (1), RIN3 (1), TBL1XR1 (1), TET2 (1), TSPAN14 (1)	0.06800	0.21162	3.442e-25	5.924e-24	49
Gastresophageal reflux disease	Obstructive pulmonary disease	56	0	DPYD (1), ATP2A2 (1), CACNA1D (1), AFF3 (1), AKAP6 (1), APOE (1), CABP1 (1), CAPZA3 (1), CCDC91 (1), CELF4 (1), CHRM3 (1), CSMD1 (1)	0.07152	0.20072	2.385e-26	4.226e-25	
Atrial fibrillation	Obstructive pulmonary disease	101	23	HMGA2 (1), CASZ1 (3), RREB1 (1), ZFPM2 (1), FGFR3 (1), ATP2A2 (1), AMPD3 (1), CACNA1D (1), AFF3 (1), AKAP6 (3), BCAS3 (1), BNC2 (1)	0.07640	0.18068	1.084e-26	1.957e-25	
Asthma	Obstructive pulmonary disease	125	19	RERE (1), CDH2 (1), AFF3 (1), APOE (1), ARHGEF28 (1), BNC2 (1), C6orf118 (1), CCDC91 (1), COL6A3 (1), CSMD1 (1), EMSY (1), ERBB3 (1)	0.08311	0.22361	2.646e-33	5.585e-32	49
Chronic obstructive pulmonary disease	Obstructive airway disease	39	38	SERPINA1 (2), CYP1A2 (2), TRPV4 (2), NOS3 (2), HMOX1 (2), ICAM1 (2), TLR4 (1), TNF (2), IL6 (2), EPHX1 (2), DSP (2), HIF1A (2)	0.38235	0.95122	3.727e-87	1.388e-85	174