## DisGeNET Top pathways by non-permulation

Geneset	stat	num.genes	pval	p.adj	gene.vals
Schizophrenia	-0.04247106	1625	2.945e-08	2.889e-04	HERC2:1 CHL1:3 APOA1:12 UGT8:17 LTN1:19 SLC26A7:32
Neoplasm Metastasis	-0.02857344	3142	1.395e-06	6.841e-03	CHL1:3 KDM5B:7 WWP1:9 APOA1:12 TJP1:14 UGT8:17
Bilateral cataracts (disorder)	-0.13051022	104	4.395e-06	1.437e-02	AKR1B1:43 TDRD7:99 HSF4:143 STOM:334 COL4A1:340 CRYM:632
Alzheimer's Disease	-0.03370734	1666	8.683e-06	1.879e-02	CHL1:3 APOA1:12 VCAM1:21 SLC26A7:32 BLMH:37 F13B:40
Hepatitis C	-0.05359554	596	9.577e-06	1.879e-02	APOA1:12 TJP1:14 AKR1B1:43 CLU:88 TNFSF10:97 GGTLC3:123
Glioblastoma	-0.03352049	1597	1.401e-05	2.291e-02	APOA1:12 VCAM1:21 KIF14:29 AKR1B1:43 ZNF131:46 MMP16:48
Neuroblastoma	-0.03429693	1452	2.001e-05	2.804e-02	HERC2:1 ANK2:2 CHL1:3 LRRN3:4 KDM5B:7 VCAM1:21
Central neuroblastoma	-0.03391847	1413	3.076e-05	3.772e-02	HERC2:1 ANK2:2 CHL1:3 LRRN3:4 KDM5B:7 VCAM1:21
Rheumatoid Arthritis	-0.03319175	1456	3.591e-05	3.914e-02	APOA1:12 PHTF1:20 VCAM1:21 N4BP1:34 F13B:40 MMP16:48
Autism Spectrum Disorders	-0.05413200	483	5.274e-05	4.466e-02	HERC2:1 LRRN3:4 ATP10A:31 MMP16:48 CSMD1:54 EHMT1:61
Autistic Disorder	-0.04813064	615	5.463e-05	4.466e-02	CHL1:3 CNTN3:13 ZNF277:23 ATP10A:31 EHMT1:61 TUBGCP5:98
Neuralgia	-0.12838207	83	5.380e-05	4.466e-02	SCN9A:8 CXCL13:50 SLC12A5:91 GRM2:209 TNF:248 SCN11A:308
Thyroid Neoplasm	-0.05720790	417	6.869e-05	5.184e-02	TJP1:14 BAX:84 CLU:88 TNFSF10:97 SELP:130 PROM1:131
Diabetes Mellitus, Insulin-Dependent	-0.04200998	744	1.166e-04	7.625e-02	APOA1:12 TJP1:14 VCAM1:21 CAMSAP2:35 AKR1B1:43 EHMT1:61
Epilepsy, Cryptogenic	-0.14317178	61	1.114e-04	7.625e-02	SLC12A5:91 VDAC2:142 UBE3A:156 SCN2A:265 ALB:373 GABRB3:618
Amyloidosis	-0.04259303	707	1.367e-04	8.382e-02	APOA1:12 VCAM1:21 CYLD:81 CLU:88 HSPB1:96 OSMR:132
Epilepsy, Temporal Lobe	-0.08515318	164	1.745e-04	8.708e-02	SLC12A5:91 TNFSF10:97 VDAC2:142 PAG1:169 GRM2:209 CRH:212
Aura	-0.14122645	59	1.775e-04	8.708e-02	SLC12A5:91 VDAC2:142 UBE3A:156 SCN2A:265 ALB:373 GABRB3:618
Awakening Epilepsy	-0.14122645	59	1.775e-04	8.708e-02	SLC12A5:91 VDAC2:142 UBE3A:156 SCN2A:265 ALB:373 GABRB3:618
Degenerative polyarthritis	-0.03897887	830	1.680e-04	8.708e-02	SCN9A:8 APOA1:12 VCAM1:21 CXCL13:50 CALCR:65 DDR2:87
Seminoma	-0.08253845	173	1.875e-04	8.760e-02	BAX:84 CLU:88 GGTLC3:123 PROM1:131 TNF:248 GH1:328
Allergic Reaction	-0.16168183	44	2.083e-04	9.087e-02	SELP:130 TNF:248 MTHFR:280 ALB:373 IL5RA:491 IL18:605
Liver carcinoma	-0.02275491	2819	2.157e-04	9.087e-02	KDM5B:7 WWP1:9 APOA1:12 TJP1:14 VCAM1:21 E2F5:26
Mammary Neoplasms	-0.02593267	1999	2.223e-04	9.087e-02	HERC2:1 KDM5B:7 WWP1:9 CNTN3:13 TJP1:14 PPP1R12B:16
Malignant lymphoma, lymphocytic, interme	-0.06309278	289	2.392e-04	9.327e-02	BAX:84 TNFSF10:97 MRC1:144 CCNE1:154 PAG1:169 TNF:248
insulinoma	-0.08661366	151	2.472e-04	9.327e-02	EHMT1:61 HSPD1:136 MRC1:144 KCNH4:153 ATF6:183 YY1:266
Lymphoma, T-Cell, Cutaneous	-0.07268804	213	2.681e-04	9.507e-02	BAX:84 TNFSF10:97 TNF:248 TP53:435 IL2:570 CD80:595
Rheumatoid Nodule	-0.24732135	18	2.810e-04	9.507e-02	VCAM1:21 TLR9:231 TNF:248 MTR:443 SELE:476 IL2:570
Tumor Progression	-0.02711649	1730	2.773e-04	9.507e-02	CHL1:3 KDM5B:7 APOA1:12 VCAM1:21 KIF14:29 AKR1B1:43
Neurodegenerative Disorders	-0.04176275	652	3.189e-04	1.009e-01	APOA1:12 BLMH:37 CXCL13:50 TRPM7:75 GDAP1:77 BAX:84
Seizures	-0.03293590	1088	3.169e-04	1.009e-01	SCN9A:8 UGT8:17 PIGG:22 SEC24D:38 NSD2:62 CLU:88
HIV Infections	-0.04191193	639	3.463e-04	1.062e-01	APOA1:12 VCAM1:21 SAMHD1:27 CXCL13:50 CYLD:81 BAX:84
Other cataract	-0.19795018	27	3.719e-04	1.106e-01	AKR1B1:43 GSR:536 IL18:605 MAP2K1:699 CRYBA4:742 GJA3:867
Presenile dementia	-0.05842118	314	3.969e-04	1.145e-01	APOA1:12 VCAM1:21 BLMH:37 TRPM7:75 BAX:84 CLU:88
Pain, Postoperative	-0.22165933	21	4.385e-04	1.197e-01	SCN9A:8 TNF:248 SCN11A:308 CRHR1:431 TRPV1:752 ABCB1:1103
Myocardial Ischemia	-0.05318471	375	4.391e-04	1.197e-01	ANK2:2 APOA1:12 VCAM1:21 AKR1B1:43 HSPB1:96 BHLHE40:112
Cholecystolithiasis	0.12492887	65	5.011e-04	1.263e-01	ABCB4:155 MYO10:260 ABCB11:342 ABCC3:362 APOBEC1:519 ABCG5:659
Epilepsy	-0.03190427	1082	5.022e-04	1.263e-01	ANK2:2 SCN9A:8 UGT8:17 PIGG:22 CAMSAP2:35 NSD2:62
Glioma	-0.02564981	1779	5.019e-04	1.263e-01	CHL1:3 TJP1:14 VCAM1:21 SAMHD1:27 KIF14:29 AKR1B1:43
Visual seizure	-0.07285112	191	5.368e-04	1.317e-01	CLU:88 SLC12A5:91 VDAC2:142 SLC38A3:175 CRH:212 TNF:248