

Supp Table 4 Top drug-phenotype pairs according to the hypergeometric index, based on the Orphanet dataset using the domain-target based methodology, only including ChEMBL drugs with drug names that can be found within SIDER. Drug: ChEMBL database ID, HyI: hypergeometric index

HPO	HPO name	Drug	Drug Name	HyI	Evidence
HP:0001894	Thrombocytosis	CHEMBL255863	NILOTINIB	13.79	PMID: 28761360, PMID: 37686630
HP:0003401	Paresthesia	CHEMBL1825138	NA	12.82	
HP:0001894	Thrombocytosis	CHEMBL941	IMATINIB	12.49	PMID: 28761360, PMID: 37686630
HP:0000132	Menorrhagia	CHEMBL231779	APIXABAN	11.17	PMID: 23220847
HP:0002170	Intracranial hemorrhage	CHEMBL48361	DABIGATRAN	10.98	
HP:0000225	Gingival bleeding	CHEMBL231779	APIXABAN	10.97	PMID: 26535102
HP:0100242	Sarcoma	CHEMBL477772	PAZOPANIB	10.89	PMID: 31123606
HP:0002018	Nausea	CHEMBL669	CYCLOBENZAPRINE	10.83	PMID: 26425251
HP:0001962	Palpitations	CHEMBL669	CYCLOBENZAPRINE	10.56	PMID: 739852
HP:0012086	Abnormal urinary color	CHEMBL58	MITOXANTRONE	9.35	PMID: 15623667
HP:0100749	Chest pain	CHEMBL669	CYCLOBENZAPRINE	9.02	
HP:0005214	Intestinal obstruction	CHEMBL941	IMATINIB	9.02	PMID: 12600228
HP:0100723	Gastrointestinal stroma tumor	CHEMBL941	IMATINIB	8.95	PMID: 38886160, PMID: 37254018
HP:0001688	Sinus bradycardia	CHEMBL1008	BEPRIDIL	8.89	PMID: 19359813
HP:0001664	Torsade de pointes	CHEMBL473	DOFETILIDE	8.83	PMID: 25634399, PMID: 39221117
HP:0001664	Torsade de pointes	CHEMBL1108	DROPERIDOL	8.83	PMID: 19291568
HP:0001664	Torsade de pointes	CHEMBL1008	BEPRIDIL	8.83	PMID: 33026317
HP:0005110	Atrial fibrillation	CHEMBL549	CITALOPRAM	8.65	PMID: 11793617 Induce bradycardia
HP:0005110	Atrial fibrillation	CHEMBL473	DOFETILIDE	8.65	PMID: 11568824
HP:0005110	Atrial fibrillation	CHEMBL43	AMSACRINE	8.65	PMID: 38244650