Supplementary Table 1. Meta-analysis of three dbGaP GWAS datasets.

BP*	SNP	allele 1	alllele 2	# of studies	P-value	OR	kb in *hVMAT2*
118957579	rs1678043	G	A	3	0.289	0.9608	-43.005
118957724	rs59578980	T	C	2	0.2923	1.1509	-42.86
118958109	rs17095818	A	G	2	0.2923	1.1509	-42.475
118958154	rs363351	T	C	2	0.3013	1.1475	-42.43
118958745	rs3847481	C	T	2	0.2737	1.1565	-41.839
118958819	rs3847482	G	A	2	0.2737	1.1565	-41.765
118959013	rs3847483	T	C	2	0.2737	1.1565	-41.571
118959363	rs17095821	T	C	2	0.2707	1.1576	-41.221
118959411	rs60088429	C	T	2	0.2633	1.1603	-41.173
118959488	rs17095824	A	T	2	0.2737	1.1565	-41.096
118959586	rs60085909	G	A	2	0.2737	1.1565	-40.998
118959696	rs61332182	A	C	2	0.2779	1.1551	-40.888
118959742	rs56830166	T	C	2	0.2737	1.1565	-40.842
118959783	rs59833995	C	T	2	0.2737	1.1565	-40.801
118960047	rs113025952	A	G	2	0.2737	1.1565	-40.537
118960072	rs112409773	A	C	2	0.2737	1.1565	-40.512
118960111	rs112004616	G	A	2	0.3128	1.1438	-40.473
118960131	rs111761399	G	A	2	0.2737	1.1565	-40.453
118960145	rs111486939	T	C	2	0.3054	1.1455	-40.439
118960151	rs112630964	G	A	2	0.2737	1.1565	-40.433
118960186	rs1678042	G	C	3	0.2219	0.9548	-40.398
118960410	rs363352	C	T	2	0.2737	1.1565	-40.174
118960530	rs363306	T	C	2	0.2737	1.1565	-40.054
118960881	rs60805690	A	G	2	0.2737	1.1565	-39.703
118961044	rs58122384	C	A	2	0.2737	1.1565	-39.54
118961082	rs58555599	T	C	2	0.2737	1.1565	-39.502
118961100	rs17095831	A	G	2	0.2737	1.1565	-39.484
118961217	rs61680075	A	G	2	0.2737	1.1565	-39.367
118961226	rs17095832	G	A	2	0.2737	1.1565	-39.358
118961344	rs363353	C	T	3	0.2341	0.9559	-39.24
118961490	rs363354	A	C	2	0.2737	1.1565	-39.094
118961555	rs363307	T	G	2	0.2737	1.1565	-39.029
118961651	rs57142493	G	A	2	0.2737	1.1565	-38.933
118961742	rs363308	T	G	2	0.9325	0.9942	-38.842
118961903	rs363309	A	G	2	0.965	0.997	-38.681
118962064	rs363310	C	T	2	0.965	0.997	-38.52
118962081	rs363311	A	G	2	0.6089	0.9598	-38.503
118962103	rs363357	T	C	2	0.6089	0.9598	-38.481
118962306	rs878499	C	G	2	0.8836	0.9932	-38.278
118962498	rs2420311	C	G	2	0.2737	1.1565	-38.086
118962873	rs963975	G	C	2	0.9736	1.0015	-37.711
118963380	rs111642103	C	T	2	0.2737	1.1565	-37.204
118963457	rs2429366	T	G	2	0.9694	0.9982	-37.127
118963469	rs2429367	C	T	2	0.8814	0.9928	-37.115

118963970	rs3858331	C	T	2	0.2737	1.1565	-36.614
118964036	rs1678040	C	T	2	0.9736	1.0015	-36.548
118964065	rs1678039	T	C	2	0.9736	1.0015	-36.519
118964875	rs363312	T	C	3	0.1961	0.9525	-35.709
118965116	rs17095848	T	C	2	0.3004	1.1492	-35.468
118965210	rs1678037	C	T	2	0.8014	0.9881	-35.374
118965386	rs57262314	A	C	2	0.3004	1.1492	-35.198
118965534	rs1678036	C	T	2	0.9741	1.0015	-35.05
118966171	rs1626211	A	C	2	0.9599	1.0023	-34.413
118966996	rs2619111	A	G	3	0.2383	0.957	-33.588
118967460	rs363313	A	G	2	0.521	1.0875	-33.124
118967507	rs3026039	T	G	2	0.3312	1.139	-33.077
118967604	rs363314	T	G	3	0.2432	0.9574	-32.98
118968164	rs2619110	C	T	2	0.8393	0.9904	-32.42
118968222	rs2803827	G	T	2	0.8337	0.9901	-32.362
118968682	rs3847484	C	G	2	0.3312	1.139	-31.902
118969346	rs363315	C	T	2	0.3343	1.1356	-31.238
118970425	rs2619109	T	C	3	0.5014	0.9716	-30.159
118970630	rs56866787	T	C	2	0.3322	1.1375	-29.954
118972083	rs11197927	C	T	2	0.7809	0.9767	-28.501
118972540	rs2532816	A	G	3	0.7706	0.9878	-28.044
118973145	rs3858335	A	C	2	0.3322	1.1375	-27.439
118973516	rs11197928	T	C	2	0.6369	0.9605	-27.068
118973556	rs17095891	A	G	2	0.3322	1.1375	-27.028
118973715	rs17095893	G	A	2	0.3617	1.129	-26.869
118974784	rs2619108	T	C	2	0.6438	0.9615	-25.8
118976075	rs73387889	T	G	2	0.1602	1.2041	-24.509
118976295	rs2619107	C	G	2	0.683	0.9642	-24.289
118976458	rs363362	A	G	2	0.1844	1.1923	-24.126
118977122	rs2619106	G	A	3	0.034	0.921	-23.462
118977123	rs2619105	C	A	3	0.0375	0.9225	-23.461
118977576	rs12571226	A	G	2	0.1293	1.2182	-23.008
118979967	rs363363	A	C	2	0.8967	1.0172	-20.617
118980138	rs2803825	A	G	2	0.5361	0.9494	-20.446
118981071	rs2803823	T	C	3	0.09457	0.9044	-19.513
118981692	rs363364	A	C	2	0.7358	1.0473	-18.892
118981820	rs363317	A	C	2	0.9244	0.9917	-18.764
118981965	rs363365	C	A	2	0.9563	0.9952	-18.619
118982388	rs363318	C	T	2	0.7498	1.0437	-18.196
118982402	rs363366	G	A	2	0.9203	0.9913	-18.182
118982582	rs363319	C	G	2	0.7498	1.0437	-18.002
118983140	rs363320	T	C	2	0.7498	1.0437	-17.444
118983815	rs2619103	G	A	3	0.01094	0.9053	-16.769
118984464	rs3026047	T	C	3	0.01125	0.898	-16.12
118985005	rs363321	C	T	2	0.7381	1.0458	-15.579
118985118	rs2619102	G	A	3	0.01859	0.9123	-15.466
118985215	rs58968504	C	G	2	0.6339	1.0678	-15.369

118985485	rs2619101	G	A	2	0.7381	1.0458	-15.099
118985613	rs2803820	A	G	3	0.01524	0.9098	-14.971
118985644	rs57663418	T	C	2	0.6339	1.0678	-14.94
118986090	rs58634906	A	G	2	0.4067	0.9134	-14.494
118986144	rs363322	A	G	2	0.7417	1.0451	-14.44
118986396	rs363371	A	G	3	0.01136	0.8983	-14.188
118986713	rs363323	T	A	3	0.9336	1.0063	-13.871
118986749	rs17095936	C	T	2	0.6137	1.0776	-13.835
118986857	rs28634565	A	C	2	0.5381	1.0885	-13.727
118986859	rs2619099	G	A	2	0.6885	1.0553	-13.725
118986928	rs2619098	G	A	2	0.6895	1.0549	-13.656
118987339	rs2803818	C	A	2	0.514	0.9472	-13.245
118987670	rs2532798	G	T	3	0.01616	0.9109	-12.914
118987781	rs7393602	C	A	2	0.2943	0.8969	-12.803
118988392	rs58610313	G	C	2	0.5359	1.089	-12.192
118988797	rs78664257	A	G	2	0.4136	0.922	-11.787
118989162	rs363324	G	A	3	0.01879	0.9128	-11.422
118989519	rs60694093	A	G	2	0.7434	1.0452	-11.065
118989604	rs3981210	A	G	2	0.5516	0.9517	-10.98
118990297	rs363325	A	G	2	0.5459	0.951	-10.287
118990516	rs363326	A	G	2	0.5237	0.9483	-10.068
118990782	rs363327	A	G	2	0.57	0.9538	-9.802
118991126	rs363328	C	T	2	0.5742	0.9543	-9.458
118991550	rs74159130	A	G	2	0.3383	0.9052	-9.034
118991582	rs363329	T	C	2	0.5784	0.9547	-9.002
118991695	rs2532799	C	T	3	0.01498	0.9096	-8.889
118991727	rs12414893	T	C	2	0.6683	0.9515	-8.857
118991768	rs12414919	A	G	2	0.6683	0.9515	-8.816
118991774	rs12414934	A	G	2	0.5503	0.9514	-8.81
118992558	**rs10886050**	A	G	3	0.007207	0.8921	-8.026
118992584	rs2619097	C	A	2	0.3313	0.9225	-8
118993210	rs363373	C	T	2	0.5232	1.0946	-7.374
118994479	rs10886051	A	C	3	0.01425	0.9023	-6.105
118994530	rs2532801	A	G	2	0.09755	0.9234	-6.054
118994838	rs363330	G	A	2	0.3507	0.9258	-5.746
118996097	rs7099849	G	A	2	0.2996	0.896	-4.487
118996115	rs4081624	C	A	2	0.09578	0.9251	-4.469
118996351	rs10689256#						-4.233
118997875	rs2532802	C	G	2	0.7848	1.0389	-2.709
118998127	rs2619096#						-2.457
118998525	rs34074668#						-2.059
118999932	rs2283135	G	C	2	0.2694	0.8895	-0.652
119000528	rs60912143	A	G	2	0.8304	1.0323	-0.056
119000572	rs60543597	A	G	2	0.1081	0.926	-0.012
119001817	rs2619093	C	T	2	0.03822	0.913	1.233
119002489	rs149461310	T	C	2	0.2575	0.8824	1.905
119002540	rs11197932	A	G	3	0.03468	0.9168	1.956

119002667	rs363332	A	G	3	0.03077	0.9151	2.083
119003161	rs61560104	G	A	2	0.8202	1.0339	2.577
119003308	rs2240779	G	C	2	0.2016	0.8685	2.724
119003564	rs363387	G	T	2	0.2016	0.8685	2.98
119004079	rs363390	C	G	3	0.03411	0.9158	3.495
119004995	rs363334	G	C	2	0.079	0.9206	4.411
119006945	rs2283136	G	A	2	0.2629	0.8867	6.361
119007385	rs363397	G	C	2	0.2883	0.8921	6.801
119007549	rs2283137	T	C	3	0.04088	0.9191	6.965
119007980	rs363336	A	C	2	0.3113	0.8967	7.396
119008485	rs363337	C	T	2	0.1149	0.9291	7.901
119008728	rs2299615	G	A	2	0.2925	0.8927	8.144
119008871	rs363399	C	T	3	0.05508	0.9244	8.287
119008896	rs363400	A	C	2	0.2925	0.8927	8.312
119009389	rs363338	C	T	2	0.06284	0.9221	8.805
119009631	rs363404	T	C	3	0.04458	0.9208	9.047
119009912	rs3753127	A	G	2	0.7514	1.046	9.328
119009966	rs2532805	G	A	2	0.2422	0.8828	9.382
119010185	rs2803815	C	T	2	0.2599	0.887	9.601
119010224	rs7899301	A	G	2	0.717	1.0506	9.64
119010412	rs363339	T	C	2	0.1536	0.9351	9.828
119010413	rs363340	C	T	2	0.1536	0.9351	9.829
119010422	rs363405	A	G	2	0.6397	1.0705	9.838
119010465	rs363341	T	C	2	0.1293	0.9338	9.881
119011795	rs17095973	A	G	2	0.5927	1.0849	11.211
119014929	rs363419	T	C	3	0.8376	0.9851	14.345
119018031	rs363221	T	C	3	0.8512	0.9868	17.447
119018260	rs79731304	C	T	3	0.9754	1.0022	17.676
119018679	rs2283138	G	A	2	0.3738	0.9437	18.095
119019126	rs929493	C	T	2	0.7201	0.9811	18.542
119019177	rs1860404	T	C	2	0.6788	0.9712	18.593
119019467	rs363251	G	A	2	0.3263	1.0411	18.883
119019658	rs11197936	G	A	2	0.06757	1.0783	19.074
119022573	rs363224	C	A	2	0.9915	1.0004	21.989
119024502	rs363225	C	T	2	0.9101	0.9954	23.918
119028940	rs2532810	A	G	3	0.5379	0.9544	28.356
119032488	rs363231	A	G	3	0.5091	0.9512	31.904
119043554	rs363294	T	C	3	0.4084	0.9398	42.97
119051788	rs2532812	A	G	3	0.6593	0.9668	51.204
119064546	rs2490629	T	C	3	0.6947	0.9705	63.962

* According to 1000 Genome Project.

Markers typed in the family study only.