

**Supplemental Table 1. Pairwise Haplotype Analysis for 19 SNPs for the Young Affected (YA) and Old Affected (OA).**

The bottom diagonal represents the p-values for haplotypic association for the old affected individuals (OA) while the top diagonal represents p-values for the young affected individuals (YA). Red bolded numbers represent p-values meeting Bonferroni significance for 171 observations. Blue bolded numbers represent p-values meeting Bonferroni significance for 19 SNPs. Black bolded numbers represent p-values not meeting Bonferroni significance but have a p-value <0.05.

	RS1862008	RS9349373	RS1421379	RS1421378	RS9381475	RS12528807	RS3799862	RS3799863	RS12195701	RS6929105	RS1805017	RS1362931	RS6899519	RS1805018	RS4498351	RS2216465	RS1051931	RS12528857	RS974670
RS1862008		0.603	0.90709	0.92815	0.18936	0.98264	0.18642	0.39425	0.35123	0.38492	<b>0.04015</b>	0.71319	0.05542	0.20894	0.91852	0.12975	0.39641	0.10124	0.75887
RS9349373	<b>0.01137</b>		0.61263	0.92174	0.14133	0.99319	0.17328	0.39664	0.32873	0.36917	<b>0.04115</b>	0.70441	0.06443	0.20329	0.9062	0.10899	0.40283	0.0964	0.76382
RS1421379	<b>0.00727</b>	<b>0.00541</b>		0.83685	0.58519	0.93457	0.18301	0.37323	0.40049	0.40039	0.07361	0.66743	0.12777	0.2063	0.85631	0.1646	0.40703	0.08917	0.7593
RS1421378	<b>0.00565</b>	<b>0.0105</b>	<b>0.00461</b>		0.56525	0.94223	0.11153	0.55343	0.69559	0.19877	0.11369	0.70399	0.16442	0.2961	0.9225	0.13229	0.1351	0.16035	0.73782
RS9381475	<b>0.00114</b>	<b>0.00271</b>	<b>0.00479</b>	<b>0.00133</b>		0.49995	0.156	0.23563	0.41404	0.31408	0.12166	0.4366	0.14812	0.1397	0.73461	0.26479	0.3268	0.12996	0.63627
RS12528807	<b>0.00601</b>	<b>0.01312</b>	<b>0.01223</b>	<b>0.03381</b>	<b>0.00128</b>		0.17545	0.39968	0.54866	0.22226	0.1376	0.7229	0.25784	0.21626	0.96716	0.24053	0.23231	0.3113	0.60911
RS3799862	<b>0.00013</b>	<b>0.0003</b>	<b>0.00022</b>	<b>0.00075</b>	<b>4.00E-05</b>	<b>0.00082</b>		0.18487	0.15211	0.27697	0.05492	0.12601	0.08504	0.1276	0.16339	0.0852	0.26828	0.18545	0.10703
RS3799863	<b>0.00411</b>	<b>0.009</b>	<b>0.00546</b>	<b>0.03416</b>	<b>0.00089</b>	0.05805	<b>0.00273</b>		0.247	0.24453	0.05695	0.42321	0.11134	0.3108	0.33767	0.05024	0.15196	0.1706	0.21517
RS12195701	<b>0.03062</b>	<b>0.028</b>	<b>0.02488</b>	<b>0.03929</b>	<b>0.00883</b>	<b>0.04678</b>	<b>0.00054</b>	<b>0.01604</b>		0.20215	0.10189	0.46357	0.22899	0.14405	0.51632	0.1583	0.17987	0.20974	0.41779
RS6929105	<b>6.00E-05</b>	<b>9.00E-05</b>	<b>8.00E-05</b>	<b>0.00032</b>	<b>2.00E-05</b>	<b>0.00032</b>	<b>0.00129</b>	<b>0.00144</b>	<b>0.00015</b>		0.064	0.11814	0.10079	0.16887	0.19854	0.10758	0.28354	0.2223	0.12469
RS1805017	<b>0.00057</b>	<b>0.00117</b>	<b>0.00138</b>	<b>0.00066</b>	<b>0.00063</b>	<b>0.00076</b>	<b>3.00E-05</b>	<b>0.00028</b>	<b>0.00081</b>	<b>2.00E-05</b>		0.09505	0.11858	<b>0.03862</b>	0.06138	0.19206	0.05839	<b>0.03633</b>	0.11629
RS1362931	<b>0.00082</b>	<b>0.00175</b>	<b>0.00114</b>	<b>0.01995</b>	<b>0.00021</b>	<b>0.00744</b>	<b>0.00301</b>	<b>0.00755</b>	<b>0.0032</b>	<b>0.00082</b>	<b>0.0001</b>		0.17494	0.13167	0.79651	0.09201	0.1464	0.36023	0.57572
RS6899519	<b>0.00098</b>	<b>0.00101</b>	<b>0.00114</b>	<b>0.00075</b>	<b>0.00095</b>	<b>0.00156</b>	<b>6.00E-05</b>	<b>0.00055</b>	<b>0.00101</b>	<b>2.00E-05</b>	<b>0.00076</b>	<b>0.00014</b>		0.06522	0.15697	0.21567	0.09571	0.06649	0.19637
RS1805018	<b>0.00112</b>	<b>0.00247</b>	<b>0.00154</b>	<b>0.00257</b>	<b>0.00028</b>	<b>0.01236</b>	<b>0.00094</b>	0.05802	<b>0.00424</b>	<b>0.0009</b>	<b>0.00012</b>	<b>0.00152</b>	<b>0.00024</b>		0.16452	<b>0.02498</b>	0.10604	0.09328	0.10012
RS4498351	<b>0.00724</b>	<b>0.01455</b>	<b>0.00634</b>	0.13399	<b>0.00169</b>	0.11694	<b>0.00073</b>	0.41063	<b>0.0104</b>	<b>0.00045</b>	<b>3.00E-05</b>	<b>0.02252</b>	<b>5.00E-05</b>	0.08736		0.11975	0.11521	0.25637	0.51969
RS2216465	<b>0.00243</b>	<b>0.0045</b>	<b>0.00378</b>	<b>0.01135</b>	<b>0.00151</b>	<b>0.00654</b>	<b>0.00036</b>	<b>0.00039</b>	<b>0.00545</b>	<b>0.00011</b>	<b>0.00112</b>	<b>0.00215</b>	<b>0.00054</b>	<b>0.00039</b>	<b>0.00162</b>		0.08837	0.12941	0.2215
RS1051931	<b>0.00011</b>	<b>0.00026</b>	<b>0.00017</b>	<b>0.00066</b>	<b>3.00E-05</b>	<b>0.00083</b>	<b>0.00366</b>	<b>0.00072</b>	<b>0.00046</b>	<b>0.00313</b>	<b>2.00E-05</b>	<b>0.00834</b>	<b>4.00E-05</b>	<b>0.00092</b>	<b>0.00057</b>	<b>0.00036</b>		0.1095	0.06984
RS12528857	<b>0.02585</b>	<b>0.02113</b>	<b>0.02119</b>	<b>0.03708</b>	<b>0.00702</b>	<b>0.04844</b>	<b>0.00084</b>	<b>0.01707</b>	<b>0.02388</b>	<b>0.00022</b>	<b>0.00179</b>	<b>0.00423</b>	<b>0.00207</b>	<b>0.00383</b>	<b>0.01216</b>	<b>0.00649</b>	<b>0.00069</b>		0.23868
RS974670	<b>0.01797</b>	<b>0.02998</b>	<b>0.01543</b>	0.08261	<b>0.004</b>	0.09079	<b>0.00025</b>	0.18809	<b>0.02346</b>	<b>0.00012</b>	<b>0.00035</b>	<b>0.0057</b>	<b>0.00046</b>	<b>0.0316</b>	0.15344	<b>0.01212</b>	<b>9.00E-05</b>	<b>0.02611</b>	

**Supplemental Table 2. Haplotypes Constructed Using the 4 SNPs Identified through Backward Logistic Regression.**

HapScore represents the score statistic for association of traits with haplotype. A negative HapScore indicates the haplotype is more likely to be protective, while a more positive score indicates the haplotype is more likely to confer risk. P-values are listed for overall haplotypic association (global) and for each individual haplotype. Frequencies are listed separately for cases and controls.

Global P-value=0.006

	RS974670	A379V	RS9381475	RS1421378	Hap.Score	P-value	Control Freq	Case Freq
1	C	G	T	G	-3.31	0.0009	0.24	0.16
2	C	G	C	A	-1.04	0.30	0.09	0.03
3	T	G	T	G	0.25	0.80	0.01	0.00
4	C	G	C	G	0.69	0.49	0.22	0.18
5	C	A	C	A	0.84	0.40	0.13	0.19
6	T	G	C	A	1.08	0.28	0.30	0.37
7	C	A	C	G	2.70	0.0070	0.02	0.06

**Supplemental Table 3. PLA2G7 Polymorphisms and gene expression.** PLA2G7

expression was derived from the Affymetrix HG-U95Av2 chip using tag 37068\_at. P-value for expression is adjusted for race, sex, and age.

SNP	P-value for expression
RS974670	0.34
RS12528857	0.12
RS1051931 (A379V)	0.62
RS2216465	0.91
RS4498351	0.44
RS1805018 (I198T)	0.07
RS6899519	0.85
RS1362931	0.80
RS1805017 (R92H)	0.47
RS6929105	0.63
RS12195701	0.22
RS3799863	0.36
RS3799862	0.29
RS12528807	0.82
RS9381475	0.17
RS1421378	0.75
RS1421379	0.16
RS9349373	0.86
RS1862008	0.34