

**Supplemental Table 1: SNP details by study**

<b>SNP</b>	<b>Study</b>	<b>MAF</b>	<b>Callrate or Imputation r2</b>	<b>HWE (Controls)</b>
rs4939827	ARCTIC	0.49	r2 = 0.49	0.265
rs4939827	DALS II	0.48	99.8	0.521
rs4939827	DALS I	0.46	100.0	0.574
rs4939827	PLCO	0.49	100.0	0.285
rs4939827	WHI	0.48	100.0	0.795
rs4939827	DACHS	0.48	99.5	0.291
rs4939827	ASTERISK	0.46	99.9	0.453
rs4939827	HPFS	0.48	97.5	0.338
rs4939827	NHS	0.47	98.0	0.980
rs4939827	PHS	0.48	99.6	0.319
rs3802842	ARCTIC	0.30	r2 = 0.97	0.638
rs3802842	DALS II	0.24	99.9	0.427
rs3802842	DALS I	0.29	99.9	0.433
rs3802842	PLCO	0.28	100.0	0.970
rs3802842	WHI	0.30	100.0	0.070
rs3802842	DACHS	0.28	99.5	0.524
rs3802842	ASTERISK	0.29	99.7	0.853
rs3802842	HPFS	0.31	98.0	0.157
rs3802842	NHS	0.28	98.4	0.578
rs3802842	PHS	0.30	99.4	0.671
rs16892766	ARCTIC	0.09	r2 = 1.0	0.428
rs16892766	DALS II	0.09	100.0	0.904
rs16892766	DALS I	0.09	99.9	0.401
rs16892766	PLCO	0.09	100.0	0.280
rs16892766	WHI	0.08	99.9	0.428
rs16892766	DACHS	0.09	100.0	0.878
rs16892766	ASTERISK	0.06	100.0	0.407

rs16892766	HPFS	0.12	96.7	0.049
rs16892766	NHS	0.08	98.4	0.140
rs16892766	PHS	0.11	99.1	0.207
rs10795668	ARCTIC	0.32	r2 = 1.0	0.970
rs10795668	DALS II	0.32	100.0	0.625
rs10795668	DALS I	0.31	99.9	0.596
rs10795668	PLCO	0.33	100.0	0.887
rs10795668	WHI	0.32	99.7	0.098
rs10795668	DACHS	0.30	100.0	0.756
rs10795668	ASTERISK	0.30	100.0	0.682
rs10795668	HPFS	0.32	97.5	0.226
rs10795668	NHS	0.31	98.2	0.715
rs10795668	PHS	0.31	99.5	0.420
rs4444235	ARCTIC	0.43	r2 = 0.90	0.953
rs4444235	DALS II	0.46	99.9	0.193
rs4444235	DALS I	0.48	100.0	0.600
rs4444235	PLCO	0.47	100.0	0.295
rs4444235	WHI	0.47	99.9	0.804
rs4444235	DACHS	0.47	99.9	0.659
rs4444235	ASTERISK	0.54	99.8	0.410
rs4444235	HPFS	0.49	97.2	0.845
rs4444235	NHS*	NA	NA	NA
rs4444235	PHS	0.48	99.2	0.567
rs9929218	ARCTIC	0.30	r2 = 0.96	0.190
rs9929218	DALS II	0.28	99.6	0.103
rs9929218	DALS I	0.30	100.0	0.414
rs9929218	PLCO	0.29	100.0	0.552
rs9929218	WHI	0.32	99.9	0.474
rs9929218	DACHS	0.29	99.2	0.967
rs9929218	ASTERISK	0.31	99.7	0.476

rs9929218	HPFS	0.30	97.0	0.168
rs9929218	NHS	0.29	97.2	0.003
rs9929218	PHS	0.29	99.5	0.111
rs10411210	ARCTIC	0.11	r2 = 0.82	0.667
rs10411210	DALS II	0.10	100.0	0.041
rs10411210	DALS I	0.10	100.0	0.573
rs10411210	PLCO	0.10	100.0	0.263
rs10411210	WHI	0.09	99.9	0.464
rs10411210	DACHS	0.11	99.8	0.220
rs10411210	ASTERISK	0.11	100.0	0.530
rs10411210	HPFS	0.11	97.5	0.134
rs10411210	NHS	0.09	96.3	0.747
rs10411210	PHS	0.13	1.0	0.553
rs961253	ARCTIC	0.37	r2 = 0.96	0.651
rs961253	DALS II	0.35	99.9	0.300
rs961253	DALS I	0.38	99.9	0.528
rs961253	PLCO	0.36	100.0	0.138
rs961253	WHI	0.35	99.8	0.770
rs961253	DACHS	0.36	99.9	0.736
rs961253	ASTERISK	0.36	100.0	0.997
rs961253	HPFS	0.38	97.5	0.527
rs961253	NHS	0.37	98.7	0.733
rs961253	PHS	0.35	99.2	0.679
rs4779584	ARCTIC	0.20	r2 = 0.97	0.884
rs4779584	DALS II	0.21	99.9	0.282
rs4779584	DALS I	0.20	99.8	0.230
rs4779584	PLCO	0.19	99.9	0.289
rs4779584	WHI	0.21	99.6	0.247
rs4779584	DACHS	0.20	99.7	0.557
rs4779584	ASTERISK	0.21	99.9	0.080

rs4779584	HPFS	0.18	97.9	0.838
rs4779584	NHS	0.20	98.7	0.225
rs4779584	PHS	0.21	99.6	0.323
rs6983267	ARCTIC	0.46	$r^2 = 0.99$	0.978
rs6983267	DALS II	0.47	97.8	0.674
rs6983267	DALS I	0.46	99.9	0.846
rs6983267	PLCO	0.50	100.0	0.879
rs6983267	WHI	0.48	99.7	0.280
rs6983267	DACHS	0.48	93.8***	0.270
rs10505477	ASTERISK	0.50	95.5	0.812
rs6983267	HPFS	0.50	96.1	0.177
rs6983267	NHS	0.48	96.3	0.321
rs6983267	PHS	0.49	99.3	0.053
CAF=count allele frequency (not necessarily minor allele)				
* Excluded due to low HWE p-value				
**Not successfully genotyped				
***Genotyped in 2,849 subjects				
For ARCTIC we used imputed SNPs, not directly genotyped SNPs. All subjects had a call rate of 100% and we instead present imputation $r^2$ as a measure of imputation quality.				

