

Supplementary table 1: PLINK trend testing of 78 markers in initial ICP cohort (not corrected for multiple testing)

ABCB11				ABCC2			
	dbSNP identifier	location (BP)	nature of variant first cohort p value (trend test)		dbSNP identifier	location (BP)	nature of variant first cohort p value (trend test)
NR1H4	rs497692	169497262	Ala1028Ala 0.8	NR1H4	rs717620	101532568	<i>intronic</i> 0.48
	rs3755157	169500417	<i>intronic</i> 0.1		rs2756109	101548736	<i>intronic</i> 0.14
	rs6709087	169507256	<i>intronic</i> 0.57		rs4148391	101556856	<i>intronic</i> 0.19
	rs853773	169522593	<i>intronic</i> 0.85		rs2073337	101557416	<i>intronic</i> 0.36
	rs853772	169522901	<i>intronic</i> 0.94		rs2002042	101577921	<i>intronic</i> 0.65
	rs3821120	169525182	<i>intronic</i> 0.36		rs7476245	101584719	<i>intronic</i> 0.046
	rs16823014	169525959	<i>intronic</i> 0.15		rs3740066	101594197	Ile1324Ile 0.85
	rs4148797	169526281	<i>intronic</i> 0.17		rs3740065	101595683	<i>intronic</i> 0.79
	rs16856300	169526548	<i>intronic</i> 0.91		rs3740063	101600713	<i>intronic</i> 0.97
	rs4148794	169529894	<i>intronic</i> 0.12				
	rs17267869	169531654	<i>intronic</i> 0.97				
	rs3770585	169532113	<i>intronic</i> 7.45x10-4				
	rs2287622	169538574	Val444Ala 1.59x10-4				
	rs2058996	165942195	<i>intronic</i> 1.44x10-4				
	rs3770596	165948388	<i>intronic</i> 5.8x10-3				
	rs13416802	169550584	<i>intronic</i> 0.86				
	rs2287618	169551055	<i>intronic</i> 6.8x10-3				
	rs7605199	169564700	<i>intronic</i> 3.74x10-4				
	rs3815676	165978625	<i>intronic</i> 7.45x10-6				
	rs4148773	165982067	<i>intronic</i> 0.018				
	rs3814382	169597234	<i>intronic</i> 5.11x10-4				
	rs10930343	169598031	<i>intronic</i> 6.49x10-3				
	rs7577650	169599456	<i>intronic</i> 2.36x10-6				
ABCB4				ATP8B1			
	dbSNP identifier	location (BP)	nature of variant first cohort p value (trend test)		dbSNP identifier	location (BP)	nature of variant first cohort p value (trend test)
FGF19	rs31652	86867623	<i>intronic</i> 0.024	FGF19	rs7241054	53464481	<i>intronic</i> 0.74
	rs2097937	86868839	<i>intronic</i> 1.8x10-4		rs1968274	53465209	<i>intronic</i> 0.72
	rs31653	86870549	<i>intronic</i> 2.44x10-3		rs17685876	53468119	<i>intronic</i> 0.84
	rs2373593	86874878	<i>intronic</i> 8.33x10-3		rs317826	53474943	<i>intronic</i> 0.94
	rs31666	86890204	<i>intronic</i> 1.95x10-3		rs4308033	53485104	<i>intronic</i> 0.81
	rs31668	86891142	<i>intronic</i> 0.052		rs4306606	53485293	<i>intronic</i> 0.72
	rs8187799	86894112	Arg652Gly 0.023		rs317845	53486410	<i>intronic</i> 0.45
	rs31676	86907816	<i>intronic</i> 1.72x10-6		rs317838	53489654	<i>intronic</i> 0.94
	rs1149222	86911711	<i>intronic</i> 8.66x10-6		rs317837	53490222	<i>intronic</i> 0.8
	rs4148826	86912355	<i>intronic</i> 1.56x10-8		rs11659313	53503387	<i>intronic</i> 0.48
	rs2109505	86917342	Ile237Ile 5.86x10-9		rs319454	53504713	<i>intronic</i> 0.55
	ABC4_ indel	86919500	<i>intronic</i> 0.16		rs7236365	53509688	<i>intronic</i> 0.9
	rs1202283	86920228	Asn168Asn 8.37x10-3		rs160993	53510410	<i>intronic</i> 0.24
	rs2302386	86929880	<i>intronic</i> 2.95x10-7		rs319448	53511146	<i>intronic</i> 0.94
	rs4148812	86939343	<i>intronic</i> 0.038		rs319440	53515528	<i>intronic</i> 0.73
					rs17686300	53519863	<i>intronic</i> 0.43
					rs319457	53519863	<i>intronic</i> 0.61
					rs319406	53527210	<i>intronic</i> 0.8
					rs319409	53529582	<i>intronic</i> 0.68
	rs1789170	69218524	<i>intronic</i> 0.042		rs12456346	53546809	<i>intronic</i> 0.14
	rs3737463	69222159	<i>intronic</i> 0.87		rs9676158	53555113	<i>intronic</i> 0.12
	rs948992	69222519	<i>intronic</i> 0.41				
	rs1789364	69229182	<i>intronic</i> 0.089				
	rs4980680	69232773	<i>intronic</i> 0.85				

Supplementary Table II: Haplotype analysis of six loci implicated in ICP susceptibility

	Global statistic	degrees of freedom	p-value	corrected p
<i>ABCB11</i>	21	7	0.0036	0.0216
<i>ABCB4</i>	39	9	9.6x10 ⁻⁶	5.76x10 ⁻⁵
<i>ABCC2</i>	10	8	0.25	
<i>ATP8B1</i>	21	12	0.055	
<i>NR1H4</i>	4.9	7	0.67	
<i>FGF19</i>	13	13	0.43	

Supplementary Table IIIa: Haplotypes of *ABCB11* in the cohort contributing to global hap-score

Hap ref	rs497692	rs3755157	rs6709087	rs853773	rs853772	rs3821120	rs16823014	rs4148797	rs16856300	rs4148794	rs17267869	rs3770585	rs2287622	rs2058996	rs3770596	rs13416802	rs2287618	rs7605199	rs3815676	rs4148773	rs3814382	rs10930343	rs7577650	control freq.	case freq	Hap-Score	p-val
61	A	C	A	T	C	G	G	A	A	C	T	G	T	A	A	G	A	A	A	C	C	G	A	0.0570	0.03061	-2.67	0.0077
270	G	C	A	C	A	C	G	G	C	T	T	A	C	G	T	G	G	G	A	C	T	A	G	0.0649	0.04036	-1.49	0.1361
421	G	C	G	C	A	C	G	G	C	T	T	A	C	G	T	G	G	G	A	C	T	A	G	0.0254	0.02547	0.42	0.6772
81	A	C	A	T	C	G	G	A	A	T	C	G	C	G	T	G	G	G	A	C	T	A	G	0.0179	0.02337	0.65	0.5134
90*	A	C	A	T	C	G	G	A	A	T	T	A	C	G	T	G	G	G	A	C	T	A	G	0.0611	0.07289	1.57	0.1164
416	G	C	G	C	A	C	G	G	C	T	T	A	C	G	A	C	G	A	A	T	C	G	G	0.0151	0.02491	1.62	0.1060
454	G	C	G	C	A	G	G	A	A	T	T	A	C	G	T	G	G	G	A	C	T	A	G	0.0196	0.04573	2.76	0.0058

Abbreviations: Hap ref – haplotype reference number, freq - frequency

*Indicates base haplotype selected by software for comparisons

Supplementary table IIIb: Haplotypes of *ABCB4* in the cohort contributing to global hap-score

Hap ref	rs31652	rs2097937	rs31653	rs2373593	rs31666	rs31668	rs81877998	rs31676	rs1149222	rs4148826	rs2109505	B4_indel	rs2102283	rs2302386	rs4148812	control freq.	case freq	Hap-Score	p-val
28	A	A	G	A	T	A	A	T	G	G	A	AGAAAA	G	G	G	0.05932	0.028	-3.80	0.00015
67	G	G	A	C	C	G	A	T	G	G	A	AGAAAA	G	G	G	0.04038	0.018	-3.09	0.00202
39	A	G	G	A	C	A	G	T	G	G	A	AGAAAA	G	A	G	0.04820	0.025	-2.62	0.00881
76	G	G	A	C	T	A	A	C	T	A	T	AGAAAA	A	A	G	0.05438	0.047	-0.82	0.41113
43	A	G	G	A	C	A	G	T	T	A	T	AGAAAA	G	A	C	0.02831	0.022	-0.82	0.41239
11	A	A	G	A	T	A	A	C	G	A	T	AGAAAA	A	A	G	0.02877	0.02	-0.56	0.57280
18	A	A	G	A	T	A	A	C	T	A	T	-----	A	A	G	0.01703	0.026	1.41	0.15764
21	A	A	G	A	T	A	A	C	T	A	T	AGAAAA	G	A	C	0.19869	0.24	2.05	0.03999
20*	A	A	G	A	T	A	A	C	T	A	T	AGAAAA	A	A	G	0.40312	0.45	2.54	0.01101

Abbreviations: Hap ref – haplotype reference number, freq - frequency

*Indicates base haplotype selected by software for comparisons