

Supplementary data:

Comparative analyses of genetic risk prediction methods reveal extreme diversity of genetic predisposition to nonalcoholic fatty liver disease (NAFLD) among ethnic populations of India

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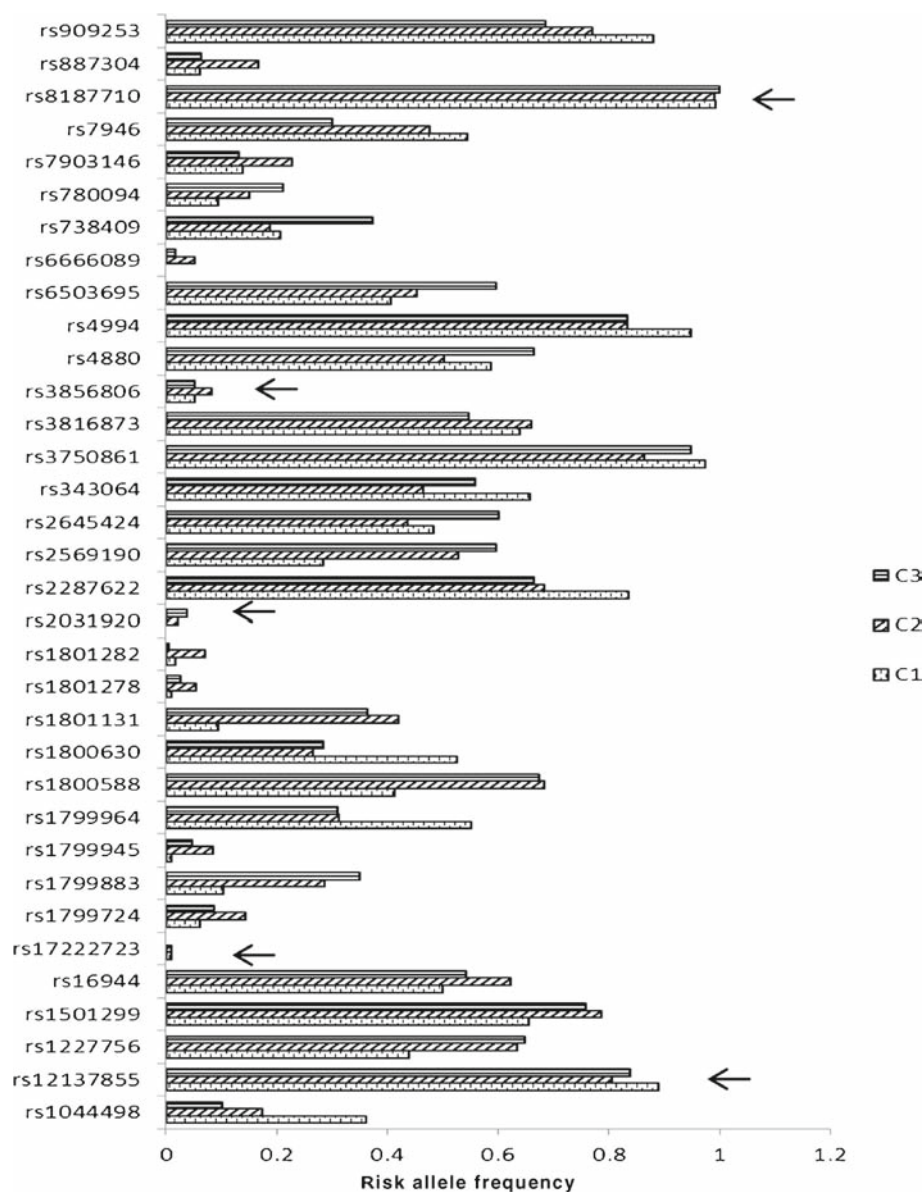


Figure 1. Risk allele frequency (RAF) at 34 NAFLD-associated loci across three Indian cluster populations (C1, C2 and C3); 29 out of 34 loci showed significant difference in RAF from pairwise binomial proportion test across three clusters; ‘arrow’ mark indicates those SNPs where no significant difference in RAF were found across three clusters.

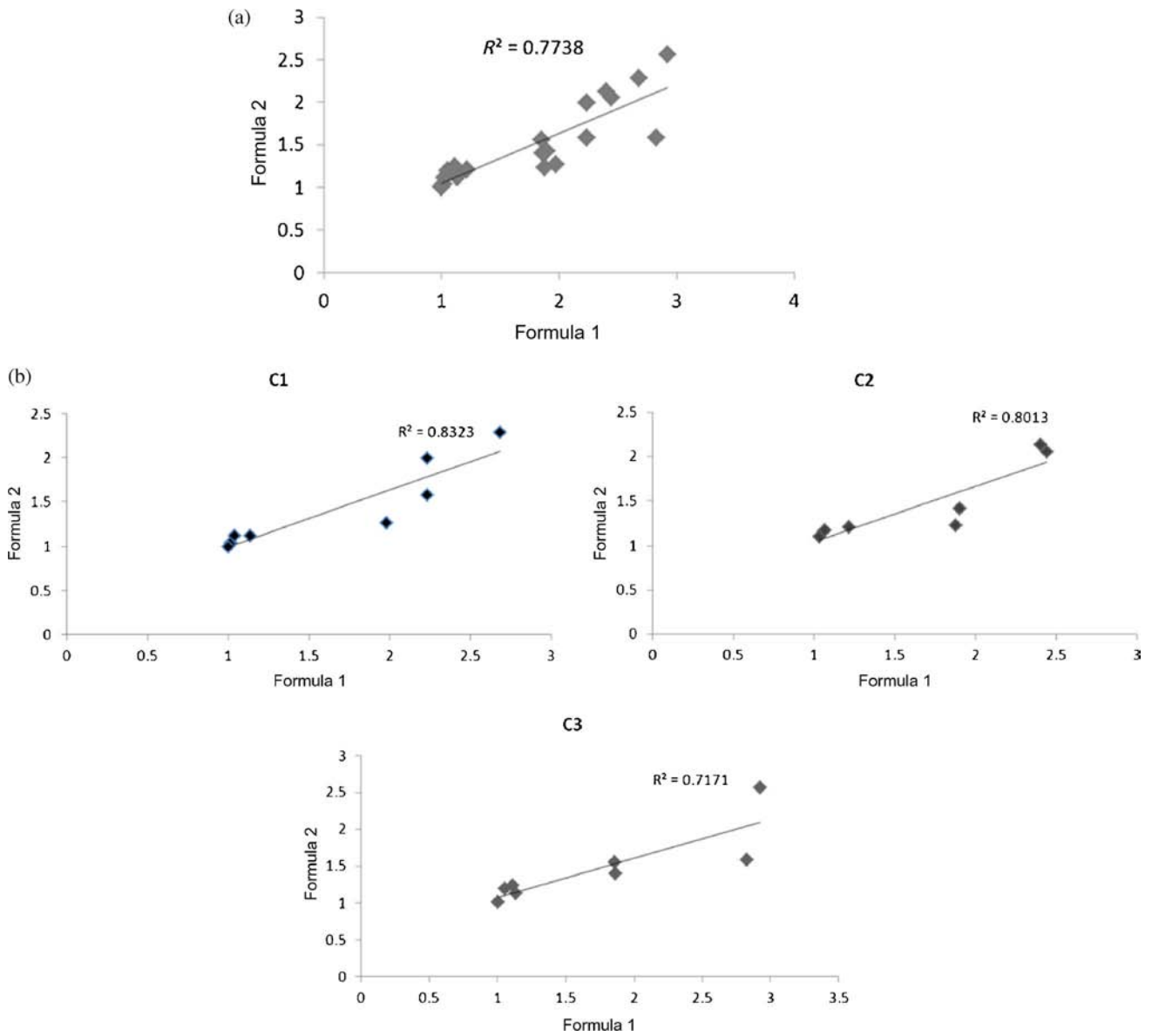


Figure 2. (a) Correlation between risk scores obtained from formula 1 (using allelic OR) and formula 2 (using genotypic OR) over 8 loci (where both allelic OR and genotypic OR information are available). (b) Correlation between risk scores of three Indian clusters: C1, C2 and C3 obtained from formula 1 (using allelic OR) and formula 2 (using genotypic OR) over eight loci (where both allelic OR and genotypic OR information are available).

Table 1. RAFs of NAFLD-associated SNPs in 20 Indian populations and four HapMap populations.

SNP	MT	BR2	BIR	GBR	GD	HO	IR	JAM	JW	KA	PY	PL	K	TRI	ONG	KO	TH	SA	IL	MP	CEU	CHB	JPT	YRI	
rs1044498	0.21	0.11	0.2	0.25	0.13	0.32	0.1	0.06	0.45	0.18	0.03	0.13	0.18	0.05	0.47	0.2	0.08	0.13	0.15	0.29	0.14	0.07	0.09	0.92	
rs12137855	0.79	0.75	0.93	0.8	0.77	0.82	0.78	0.75	1	0.68	0.83	0.8	0.87	0.84	1	0.83	0.9	0.68	0.85	0.85	0.8	0.95	0.93	0.81	
rs1227756	0.5	0.56	0.75	0.55	0.7	0.71	0.58	0.81	0.25	0.5	0.53	0.48	0.64	0.58	0.58	0.8	0.68	0.78	0.48	0.65	NA	NA	NA	NA	
rs1501299	0.64	0.78	0.75	0.83	0.83	0.89	0.83	0.72	0.63	0.73	0.78	0.75	0.84	0.79	0.61	0.78	0.78	0.7	0.73	0.73	NA	NA	NA	NA	
rs16944	0.64	0.72	0.68	0.58	0.63	0.68	0.68	0.44	0.7	0.68	0.72	0.48	0.66	0.45	0.47	0.53	0.6	0.6	0.63	0.5	NA	NA	NA	NA	
rs17222723	0	0.03	0	0	0.05	0	0	0	0	0.03	0	0	0	0	0	0	0	0.03	0	0	NA	NA	NA	NA	
rs1799724	0.08	0.03	0.32	0.2	0.24	0.03	0.05	0.13	0	0.18	0.15	0.08	0.08	0.06	0	0.21	0.08	0.16	0.18	0.05	NA	NA	NA	NA	
rs1799883	0.17	0.32	0.26	0.34	0.35	0.26	0.2	0.19	0	0.3	0.53	0.28	0.34	0.39	0	0.25	0.3	0.3	0.28	0.34	NA	NA	NA	NA	
rs1799945	0	0.11	0	0.05	0.13	0.03	0.05	0.06	0	0.03	0.11	0.13	0.03	0	0	0.18	0.05	0.18	0.1	0.03	0.18	0.13	0.04	0	
rs1799964	0.36	0.53	0.25	0.25	0.4	0.39	0.33	0.31	0.75	0.78	0.11	0.45	0.39	0.21	0.69	0.13	0.43	0.28	0.05	0.48	NA	NA	NA	NA	
rs1800588	0.64	0.67	0.58	0.88	0.7	0.58	0.73	0.67	0.37	0.5	0.81	0.83	0.71	0.66	0.36	0.5	0.6	0.68	0.68	0.65	0.74	0.61	0.41	0.47	
rs1800630	0.33	0.44	0.23	0.2	0.35	0.34	0.23	0.31	0.75	0.83	0.11	0.35	0.34	0.21	0.68	0.13	0.33	0.28	0.05	0.45	NA	NA	NA	NA	
rs1801131	0.43	0.61	0.43	0.43	0.34	0.39	0.38	0.31	0.08	0.05	0.5	0.38	0.53	0.29	0.17	0.43	0.48	0.48	0.25	0.25	0.34	0.22	0.19	0.12	
rs1801278	0.08	0	0.1	0.03	0.03	0.05	0	0	0	0.03	0.06	0.03	0.08	0	0	0.13	0	0.15	0	0.08	0.06	0.02	0.08	0.1	
rs1801282	0.07	0.06	0.05	0.08	0.08	0.11	0.18	0	0	0.05	0	0.1	0.03	0	0	0	0.03	0.08	0.03	0	0.1	0.05	0.04	0	
rs2031920	0	0	0	0.03	0.03	0	0.03	0	0	0	0	0	0	0.03	0	0	0.03	0.13	0.03	0.13	0.06	0.27	0.19	0	
rs2287622	0.79	0.58	0.73	0.58	0.73	0.55	0.6	0.58	0.9	0.73	0.81	0.65	0.66	0.74	0.89	0.83	0.68	0.83	0.73	0.53	0.64	0.68	0.79	0.55	
rs2569190	0.79	0.61	0.45	0.7	0.4	0.34	0.63	0.64	0.23	0.38	0.5	0.58	0.61	0.71	0.25	0.68	0.73	0.43	0.3	0.4	NA	NA	NA	NA	
rs2645424	0.43	0.42	0.48	0.48	0.38	0.45	0.53	0.53	0.48	0.5	0.72	0.48	0.47	0.68	0.47	0.28	0.5	0.43	0.45	0.58	NA	NA	NA	NA	
rs343064	0.64	0.47	0.38	0.58	0.45	0.45	0.4	0.39	0.73	0.68	0.81	0.5	0.5	0.63	0.94	0.45	0.5	0.53	0.35	0.48	NA	NA	NA	NA	
rs3750861	1	0.89	0.73	0.98	0.93	0.84	0.85	0.97	1	0.93	0.92	0.78	0.82	0.97	1	0.85	0.9	0.85	0.95	0.98	0.94	0.96	0.97	0.99	
rs3816873	0.36	0.67	0.73	0.65	0.65	0.82	0.63	0.69	0.7	0.6	0.31	0.55	0.63	0.61	0.83	0.7	0.58	0.68	0.68	0.55	0.26	0.11	0.16	0.21	
rs3856806	0.07	0.06	0	0.13	0.05	0.13	0.15	0.06	0	0.15	0.06	0.13	0.05	0.03	0	0.03	0.13	0.1	0.1	0	0.13	0.25	0.17	0.05	
rs4880	0.43	0.36	0.65	0.45	0.58	0.5	0.55	0.78	0.58	0.55	0.56	0.38	0.58	0.76	0.75	0.43	0.6	0.6	0.48	0.63	NA	NA	NA	NA	
rs4994	1	0.86	0.68	0.93	0.9	0.89	0.83	0.78	1	0.85	0.78	0.85	0.87	0.92	1	0.58	0.9	0.88	0.85	0.78	NA	NA	NA	NA	
rs6503695	0.36	0.53	0.28	0.43	0.45	0.39	0.53	0.56	0.35	0.45	0.53	0.55	0.66	0.53	0.31	0.28	0.75	0.48	0.48	0.6	0.66	0.68	0.61	0.58	
rs6666089	0.07	0.03	0	0.15	0.08	0.08	0.05	0	0	0	0	0.03	0.13	0.05	0	0	0	0	0.03	0.03	NA	NA	NA	NA	
rs738409	0.21	0.28	0.32	0.25	0.25	0.13	0.15	0.36	0.15	0.25	0.25	0.18	0.18	0.37	0.22	0.15	0.38	0.08	0.1	0.5	0.23	0.34	0.43	0.13	
rs780094	0.36	0.06	0.15	0.1	0.11	0.16	0.3	0.28	0.05	0.13	0	0.1	0.26	0.26	0.11	0.08	0.2	0.15	0.1	0.3	0.39	0.61	0.6	0.13	
rs7903146	0.21	0.25	0.08	0.38	0.25	0.11	0.23	0.03	0.05	0.35	0.14	0.2	0.29	0.05	0	0.13	0.28	0.25	0.35	0.15	0.28	0.02	0.04	0.26	
rs7946	0.58	0.47	0.5	0.58	0.5	0.34	0.43	0.33	0.63	0.58	0.28	0.38	0.76	0.24	0.58	0.55	0.28	0.3	0.4	0.38	0.74	0.12	0.26	0.35	
rs8187710	1	0.97	1	1	0.95	1	1	1	1	0.98	1	1	1	1	1	1	1	0.98	1	1	0.95	1	1	1	0.88
rs887304	0.21	0.17	0.1	0.13	0.15	0.13	0.18	0.03	0	0.18	0.22	0.18	0.21	0	0	0.25	0	0.25	0.08	0.08	NA	NA	NA	NA	
rs909253	0.71	0.89	0.9	0.73	0.83	0.82	0.78	0.67	0.95	0.75	0.94	0.8	0.74	0.5	0.94	0.63	0.63	0.8	0.6	0.7	NA	NA	NA	NA	

NA, not available.

Table 2. Allelic and genotypic OR (OR1 and OR2) of eight loci.

SNP	RA	Allelic OR	OR1	OR2
rs1801282	G	1.43	2.62	2.2
rs2031920	T	1.75	3.7	3.59
rs2287622	C	1.32	1.77	1.14
rs3856806	T	2.28	6.69	2.12
rs6503695	T	2.32	4	2.04
rs738409	G	3.26	3.63	1.46
rs780094	T	1.16	1.51	1.66
rs7946	T	2.28	4.35	1.6