

Supplemental Material

Comparative Genome-Wide Association Studies in Mice and Humans for Trimethylamine

***N*-oxide, a Pro-Atherogenic Metabolite of Choline and L-Carnitine**

Hartiala et al.

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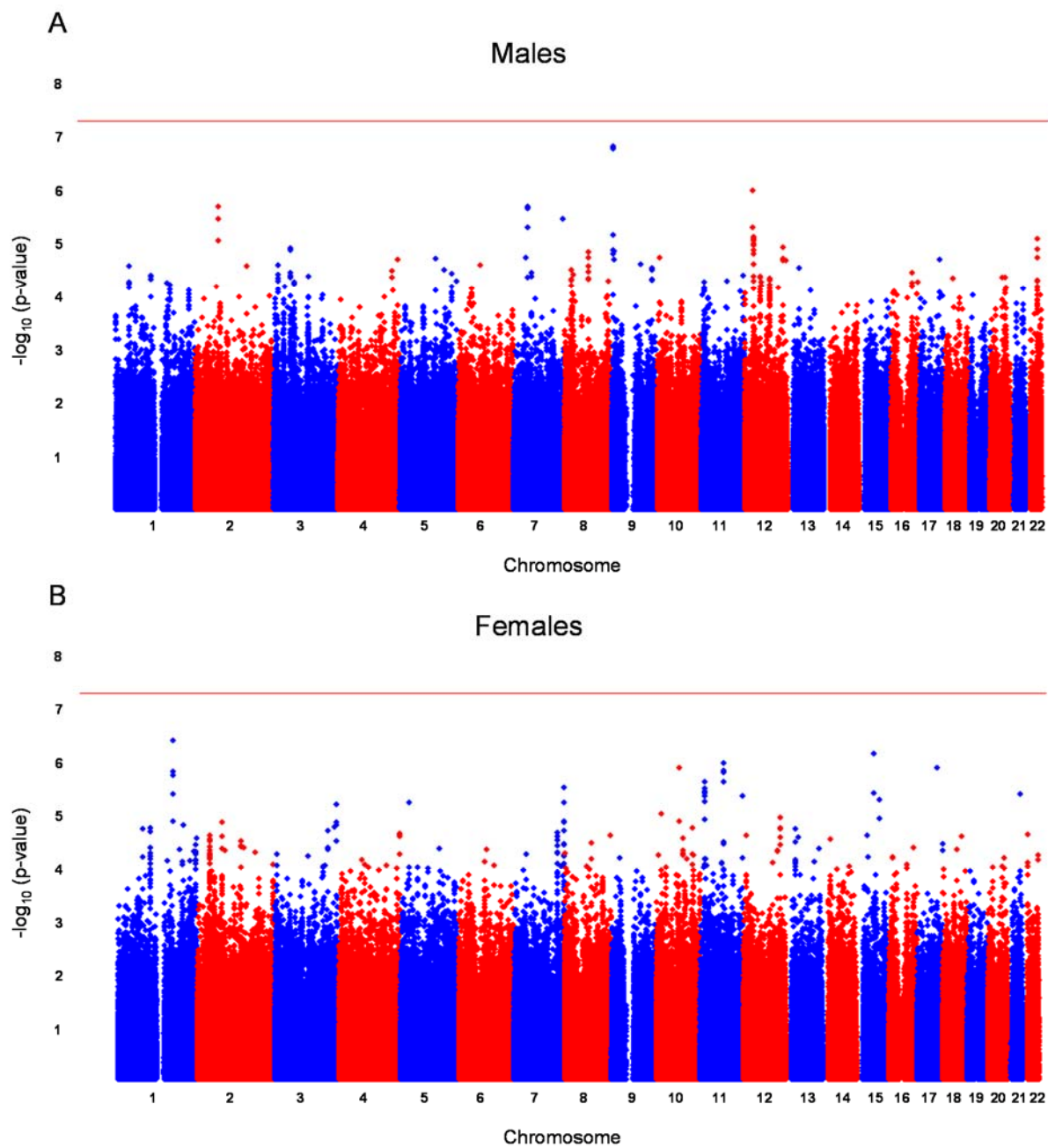
Supplemental Table I. Sex-stratified Association of SNPs Identified in Human and Mouse GWAS for Plasma TMAO Levels.

Males								
rs17359359					rs12402441			
Stage	GG	AG	AA	^ap-value	AA	AG	GG	^ap-value
GWAS	5.0 ± 6.5 (n=1231)	8.9 ± 24.9 (n=154)	7.7 ± 5.8 (n=5)	0.0002	5.6 ± 10.9 (n=1238)	4.2 ± 4.7 (n=147)	4.4 ± 2.6 (n=5)	0.008
Replication	6.3 ± 11.8 (n=836)	9.9 ± 30.0 (n=108)	3.1 ± 2.2 (n=7)	0.73	7.0 ± 15.8 (n=950)	5.5 ± 7.7 (n=93)	4.9 ± 1.0 (n=7)	0.65
Combined	5.6 ± 9.1 (n=2094)	9.3 ± 27.0 (n=262)	5.0 ± 4.5 (n=12)	0.02	6.2 ± 13.2 (n=2188)	4.7 ± 6.1 (n=240)	4.7 ± 1.7 (n=12)	0.02
Females								
rs17359359					rs12402441			
Stage	GG	AG	AA	^ap-value	AA	AG	GG	^ap-value
GWAS	6.1 ± 10.8 (n=496)	6.8 ± 5.6 (n=84)	13.6 ± 11.5 (n=3)	0.0003	6.4 ± 10.7 (n=531)	5.0 ± 3.7 (n=50)	1.5 ± 0.7 (n=2)	0.31
Replication	6.9 ± 17.7 (n=612)	6.3 ± 5.8 (n=71)	5.0 ± 1.1 (n=3)	0.47	6.1 ± 8.4 (n=648)	13.6 ± 47.6 (n=65)	3.6 ± 2.8 (n=3)	0.22
Combined	6.6 ± 15.0 (n=1108)	6.6 ± 5.6 (n=155)	9.3 ± 8.7 (n=6)	0.003	6.2 ± 9.5 (n=1179)	9.8 ± 36.0 (n=115)	2.7 ± 2.0 (n=5)	0.74

Mean (± SD) plasma TMAO levels (μM) are shown as a function of genotype.

^aP-values obtained using linear regression with natural log transformed values after adjustment for age.

Supplemental Figure I



Supplemental Figure I. Sex-stratified GWAS results for plasma TMAO levels. Manhattan plots derived from GWAS analyses performed in males (A) and females (B) separately did not reveal sex-specific effects on chromosomes 1q23.3 and 2p12 or identify other loci that exceed the genome-wide threshold for significance (indicated by the horizontal red line).