Supplemental Material: Table 1: Flanking primers and PCR conditions for the genes involved in arsenic metabolism

Name of primers	Sequence of primers (5' to 3')	Amplicon (bp)	Annealing temperature
*PNP*_PF	AAAATTAGCCAGGCATGGTG	Promoter (935)	56°C
*PNP*_PR	GACTCCTCCCACGAAGAAAA		
*PNP*_1F	TTTTCTTCGTGGGAGGAGTC	Exon 1 (866)	64°C
*PNP*_1R	GGTTCCCGGGTCACAGCAC		
*PNP*_2F	TATGCAGCTTGCCAGTGTTC	Exon 2 (748)	56°C
*PNP*_2R	AACCCTTGCCCTTTACTTGG		
*PNP*_3F	TAATGCCTGGCTCTCTCACC	Exons 3-5 (1128)	62°C
*PNP*_5R	GATGCTACACCAAATCTCACCA		
*PNP*_6F	ACAGGTGTGAACCACTGCAC	Exon 6 (1007)	60°C
*PNP*_6R	TTGCCCTTCTTCATCCTTTG		
As3MT _2F	CAGCACCCTCTCCTTTCAAC	Exon 2-3 (544)	60°C
*As3MT*_3R	TGGTGGCTACGGGTTAATTC		
As3MT _4F	CAGATACAGTCCCAGCCTTC	Exon 4 (501)	60°C
As3MT _4R	CAGTTTCCAAGACAGGAAGC		
As3MT _5F	GGCAGCAGGGAGTTTATGTC	Exon 5 (519)	56°C
As3MT _5R	GATGTGGTAGCGTGTGCCTA		
As3MT _6F	CATGGTGAACATCAGGACAGA	Exon 6 (506)	56°C
As3MT _6R	TCCATATCCGGGGTATTCCT		
As3MT _7F	TTGTTCACAAAGGGTCAGCTT	Exon 7 (546)	56°C
*As3MT*_7R	GACACCAGCTTGGGAACAAT		
*As3MT*_8F	TCCACCAGTGAGTGTCCTGA	Exon 8 (512)	60°C
*As3MT*_8R	GGGGGTTACCATTGTACAGG		
As3MT _9F	ATCTTGCCTCCTGTACAATGG	Exon 9 (501)	60°C
As3MT _9R	AAACACACACATACATTTAAACACA		
As3MT _10F	CAGTGTGTAAGGATTAGTGCTGGT	Exon 10 (331)	60°C
As3MT _10R	GTCTGGGTGACAGAGAGAGAACACCA		

As3MT _11F	GAGAAGTCGTTTTAGCATTTCCGTAT	Exon 11	(556)	70°C
As3MT _11R	ATTTGTTGTTTCTTATGGTCTGTGCTAT			
GSTO1 _1F	CGCCACCTACTTCCTGAATC	Exon 1-2	(494)	64°C
*GSTO1*_ 2R	GGGTAGAAGGGGGCTGAGAC			
*GSTO1*_3F	GGGGTCTGATCAGCTAAGTGG	Exon 3	(404)	60°C
*GSTO1*_3R	CACTGAACCATAAATGGCAGC			
*GSTO1*_4F	AGTTGTTTCTTAAACGTGCC	Exon 4	(453)	60°C
*GSTO1*_4R	GTGACTTGGAAAGTGGGAA			
*GSTO1*_5F	CCCAGACCAACAGATTCTAAAGC	Exon 5	(436)	60°C
*GSTO1*_5R	GACATGCCTGGGATAGTCCAAG			
*GSTO1*_6F	GGGAGACTCTGTGATGTCATCC	Exon 6	(352)	60°C
*GSTO1*_6R	GGCTGTTGATGTCAAATCAGTCAG			
GSTO2 _5F	TCCACTGAGAACCTGTGTCCT	Exon 5	(182)	62°C
GSTO2 _5R	TGCCTAGCTTCCTCCACTGT			

Supplemental Material: Table 2: Sequence variants found in arsenic metabolizing genes in arsenic exposed study population.

Genes	Location	Type of change	MAF[a] (%)	dbSNP rs#
PNP [NM_000270]				
	5' Genomic	1-272 G>A	0.01	rs17880290
	Intron 1	c.12 –107 T>G	0.01	rs17879107
		c.12 –18 A>T	0.018	novel
	Exon 2	c.60 C>T (His20His)	0.13	rs1049562
		c.151 G>A (Gly51Ser)	0.12	rs1049564
		c.171 C>T (Pro57Pro)	0.13	rs1130650
	Intron 2	c.181 +36 GG del	0.002	novel
		c.181 +39 G>A	0.0011	novel
		c.181 +99 A>G	0.01	rs17885917
		c.181 +162 G>A	0.012	rs17886095
		c.181 +198 A>G	0.057	rs1713422
	Intron 3	c.285 +10 A>G	0.11	rs1713420
As3MT [NM_020682]				
	Intron 6	c.459+56 A>G	0.03	rs3740394
		c.529-56 G>C	0.18	rs3740393
	Intron 7	c.743-126 T>C	0.25	rs3740392
	Intron 8	c.742 + 213 C>T	0.102	rs3740390
	Exon 9	c.860T>C (Met287Thr)	0.05	rs11191439
	Intron 9	c.886 –50 T>C	0.15	rs7085854
	Intron10	c.1020-282 C>T	0.15	rs10786722
		c.1020-94 G>A	0.33	rs10748835
GSTO1 [NM_004832]				
	Exon 4	c.420 C>A (Ala140Asp)	0.13	rs4925
		c.463 -/AGG	0.03	rs11509437
	Intron 4	c.465+28 A>G	0.01	rs17884170
		c.465+34 C>T	0.01	rs17883344
	Exon 6	c.622 G>A (Glu208Lys)	0.11	rs11509438
	3'UTR	c.723+15 G>C	0.004	novel
GSTO2 [NM_183239]				
	Exon 5	c.424A>G (Asn142Asp)	0.28	rs156697

[a]MAF: Minor allele frequency