

Supplementary Information

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Received: 29 July 2011; in revised form: 29 August 2011 / Accepted: 30 August 2011 /

Published: 9 September 2011

Abstract: Aims: The relationship between variants in *SLCO1B1* and *SLCO2B1* genes and lipid-lowering response to atorvastatin was investigated. Material and Methods: One-hundred-thirty-six unrelated individuals with hypercholesterolemia were selected and treated with atorvastatin (10 mg/day/4 weeks). They were genotyped with a panel of ancestry informative markers for individual African component of ancestry (ACA) estimation by SNaPshot[®] and *SLCO1B1* (c.388A>G, c.463C>A and c.521T>C) and *SLCO2B1* (-71T>C) gene polymorphisms were identified by TaqMan[®] Real-time PCR. Results: Subjects

carrying *SLCO1B1* c.388GG genotype exhibited significantly high low-density lipoprotein (LDL) cholesterol reduction relative to c.388AA+c.388AG carriers (41 vs. 37%, $p = 0.034$). Haplotype analysis revealed that homozygous of *SLCO1B1**15 (c.521C and c.388G) variant had similar response to statin relative to heterozygous and non-carriers. A multivariate logistic regression analysis confirmed that c.388GG genotype was associated with higher LDL cholesterol reduction in the study population (OR: 3.2, CI95%:1.3–8.0, $p < 0.05$). Conclusion: *SLCO1B1* c.388A>G polymorphism causes significant increase in atorvastatin response and may be an important marker for predicting efficacy of lipid-lowering therapy.

Keywords: OATP; atorvastatin; single nucleotide polymorphisms; pharmacogenetics

Table 1S. Frequency of the minor alleles of *SLC* polymorphisms according to ACA quartiles in the Brazilian sample.

ACA	SLCO1B1		SLCO2B1	
	c.388G>A G allele	c.521T>C C allele	c.463C>A A allele	–71 T>C C allele
<0.25	0.63	0.14	0.26	0.54
0.25–0.50	0.61	0.06	0.23	0.39
0.50–0.75	0.81	0.06	0.06	0.37
>0.75	0.70	0	0	0.10
	($\chi^2 = 2.311$, $p = 0.51$)	($\chi^2 = 2.421$, $p = 0.49$)	($\chi^2 = 5.823$, $p = 0.12$)	($\chi^2 = 7.9851$, $p = 0.046$)

ACA: African component ancestry. P: p -value, as compared by Chi-Square test.

Figure 1S. Comparison of African Ancestral Component (ACA) mean values between the alleles of *SLCO1B1* and *SLCO2B1* polymorphisms. p: *p*-value, as compared by *t*-test.

