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Coffee and Green Tea Decoction Intake in the Tunisian Population According to Genetic Polymorphisms of Genes Involved in Habitual Caffeine Intake

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ABSTRACT The relationship between genetic variation and caffeinated beverages intake has been investigated in various human populations, but not among North Africans who have distinct caffeinated beverage dietary habits. Therefore, this study analysed the association between rs6968865 (*AHR*), rs382140 (*NRCAM*), rs9526558 (*CAB39L*), rs7754744 (*PDSS2*) and rs68157013 (*TAS2R43)* SNPs from previous GWASs on habitual caffeine consumption and caffeinated beverage intake in 568 healthy blood donors from the Tunisian population. The *AHR* caffeine metabolism gene SNP was associated with coffee intake but not with green tea decoction. However, the association of SNPs with caffeine metabolism (*CAB39L* and *PDSS2*), addiction to caffeine (*NRCAM*) and perceived caffeine bitterness (*TAS2R43*) genes was only observed or was stronger with the highest caffeine-containing beverage green tea decoction. The researchers further detected an opposite association of *PDSS2* gene SNP with coffee and tea intake. The study provides additional data on caffeinated beverage intake genetics in a population with specific dietary habits.