

***XRCC1* polymorphisms and haplotypes in Mexican patients with acute lymphoblastic leukemia**

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Genet. Mol. Res. 8 (4): 1451-1458 (2009)

Received September 11, 2009

Accepted October 7, 2009

Published December 1, 2009

ABSTRACT. We examined the influence of the Arg194Trp, Arg280His, and Arg399Gln polymorphisms of *XRCC1* (X-ray repair cross-complementing group 1) on the development of childhood acute lymphoblastic leukemia (ALL) in 120 ALL patients and 120 controls in Mexico. All of them were genotyped for these polymorphisms, using polymerase chain reaction. No significant differences in allele and genotype frequencies for any polymorphism were observed between patients and controls. Estimation of haplotypes showed the eight expected haplotypes (A-H), seven of which were found in both patients

and controls; haplotype A (Arg-Arg-Arg) was the most common, whereas haplotypes F and G were absent in patients and controls, respectively. Haplotype B (Trp-Arg-Arg) was found to be associated with an increased risk of ALL (odds ratio (OR) = 1.95, 95% confidence interval (CI) = 1.13-3.37; P = 0.016), particularly in males (OR = 2.65, 95%CI = 1.25-5.63; P = 0.01). Individually, the 194Trp, 280His, and 399Gln alleles were not associated with significantly increased risk for ALL in these Mexican children.

Key words: Polymorphisms; Haplotypes; *XRCCI*; Childhood acute lymphoblastic leukemia; Mexicans