



Genetic diversity of HLA-DRB1 alleles in the Tujia population of Wufeng, Hubei Province, China

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ABSTRACT. We established a genetic database by investigating human leukocyte antigen (HLA)-DRB1 allelic frequencies in a disease-association study in the Tujia population in Wufang, Hubei, China. The allele frequencies of the HLA-DRB1 locus in 262 healthy, unrelated Tujia individuals living in the Wufeng region of the Hubei Province were analyzed using the Luminex HLA sequence-specific oligonucleotide method with a WAKFlow HLA typing kit. A total of 13 alleles were detected at the HLA-DRB1 locus. HLA-DRB1*09 was the most common allele (22.52%), followed by DRB1*08 and

DRB1*15 (11.07%), and DRB1*12 and DRB1*04 (10.69%). These data were compared with the results obtained for 10 other ethnic groups living in other regions as well as to Han groups using neighbor-joining dendrograms and principal component analysis. The results showed that the Tujia population has a close genetic relationship with the Middle Han population at the HLA-DRB1 locus. This information will be useful for HLA-DRB1-linked disease-association studies.

Key words: Alleles; HLA-DRB1; Principal component analysis; Neighbor-joining dendrograms