

Evaluation of Nine Microsatellite Loci in a Mulatto Population

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The use of Short Tandem Repeat loci (STRs) for population genetic studies, human identity testing and forensic analysis requires the establishment of a genetic database for each reference population. In the present study we analyzed the variability of nine microsatellite loci in 240 mulattos individuals of the Caribbean coast of Colombia. This group has been studied previously at the HLA class I and II loci (Tissue Antigens 1992;39:128-33). The following STRs were studied: D3S1358, vWA, FGA, TH01, TPOX, CSF1PO, D5S818, D13S317 and D7S820. Genomic DNA was obtained by salting out method and the Perkin-Elmer's AmpF/STR™ Profiler kit was used for the polymerase chain reaction of the nine STRs. ABI PRISM® 310 genetic analyzer was used for electrophoretic analysis. We observed eight alleles for D3S1358 (the most frequent allele was D3S1358-15: 23.3%); 11 for vWA (vWA-15: 24.5%); 12 for FGA (FGA-24: 20%); 7 for TH01 (TH01- 8: 20.4%); 8 for TPOX (TPOX- 10: 21.67%); 8 for CSF1PO (CSF1PO-12: 33.3%); 9 for D5S818 (D5S818-9: 27.0%); 8 for D13S317 (D13S317- 12: 25.8%) and 8 for D7S820 (D7S820-10: 28.7%). Heterozygosity indices for these loci in the mulatto population ranged from 0.8 to 0.92 and they have a 99.9% of combined probability of exclusion. The results of this study show that these nine loci are highly informative for forensic and parentage testing.