D8S1179 Locus in a Portuguese Population

T. Ribeiro[2], R.M. Brito[1], R. Espinheira[1], H. Geada[1]
[1]Institute of Legal Medicine, Lisbon
[2]Department of Legal Medicine, University of Lisbon, Lisbon, Portugal

The D8S1179 system, a tetrameric short tandem repeat locus, with a 4 bp repeat motif (TCTA)n, was studied in a Portuguese population sample. A total of 315 unrelated individuals from paternity investigation cases were analysed in order to obtain a database for forensic purposes.

DNA was extracted from blood stains by the Chelex method and amplified on a GeneAmp PCR System 2400. PCR products were detected using an A.L.F. DNA sequencer with AFLwin and AlleleLinks version 1.00.

Eleven alleles have been observed from allele 8 to allele 18 (range 162-202 bp). Allele 13 was the most frequent with an overall frequency higher than 30%. Hardy-Weinberg equilibrium, observed heterozygosity, chance of exclusion, power of discrimination and other forensic parameters were studied. Comparison with other populations were investigated.

Paternity investigation analysis was performed in more than 120 cases. Segregation studies of maternal meioses were also performed.

These results suggest that D8S1179 system is a useful STR locus for routine paternity investigation and human identification.