

MUTATIONS RATES ANALYSIS FOR 21 STR LOCI IN PERUVIAN POPULATION

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In this study germline mutations of 42462 allelic transfers from father to son in analysis of biological paternity cases Peruvian trios (father, mother and son) and duets (father and son) donors were analyzed. DNA samples were purified from dried blood on FTA cards preserved. The study was conducted to evaluate 21 autosomal loci: CSF1PO, D10S2325, D12S391, D13S317, D16S539, D18S51, D21S11, D5S818, D7S820, D8S1179, Penta E, VWA, F13A01, D2S441, PENTA D, D10S1248, TH01, F13B, D3S1358, TPOX and FGA. Biological parenthood in each case was validated with a more than 100000 and 10000 Paternity index for trios and duets respectively. Sixty three events mutation were detected in 16 of the 21 loci analyzed. In the loci F13A01, D2S441, D10S1248, TH01 and TPOX no mutations were detected. The mutation frequency was estimated as 0.0015. The rate of locus-specific mutation was ranged from 0.0000 to 0.0038. This work provides the first report of Peruvian mutational frequencies in paternity testing cases.