GENETIC POPULATION DATA ON A NEW PANEL OF MICROSATELLITE MARKERS OF HUMAN X-CHROMOSOME

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Microsatellites (Short Tandem Repeat - STR) of X-chromosome has been studied in recent years as a useful tool in kinship and paternity test, population genetics and anthropological studies. These markers are extremely informative, since it behaves as autosomal chromosomes in women and as a lineage marker in men, being used in ancestry investigation. In this study we aimed to characterize 34 new STR markers localized along the entire X-chromosome, predicted by *in silico* mining in a population of Rio de Janeiro, Brazil. We selected 34 polymorphic markers, based in their size distribution among eight random samples. Amplification reactions were prepared according to melting temperature (Tm) for all 34 markers. The expected heterozigozity of the markers were between 0.7 to 0.8, and genetic diversity of 0.9993, indicating high genetic variability. The values of power of discrimination and power of exclusion range from 0.82 to 0.98 and 0.34 to 0.80, respectively.

CONCLUSION: These results demonstrate the use of these markers for human identification. Also, these markers can be informative supporting medical and evolutionary studies.