VNTR and STR POLYMORPHISM IN ARGENTINE POPULATION
ALLELE FREQUENCY DISTRIBUTION

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The allele frequency distribution of 6 VNTR and 8 STR loci has been determined in Argentine population for paternity testing and forensic identification. Blood samples of 150 unrelated individuals were collected from all over the country. The purified DNA was digested with HaeIII and analyzed by Southern blot technique using DNA probes and detected by chemiluminicence (GIBCO/BRL systems). STRs loci were analyzed by Polymerase Chain Reaction (PCR) technique with specific primers. Different alleles distinguished from one another using silver stain detection following electrophoretic separation (Promega *GenePrint*® STR System). Allele frequencies and expected heterozygosity were calculated. The sample set was further tested for departure from Hardy-Weinberg equilibrium and power of exclusion.

Conclusions:

1. Allele frequency distribution is compatible with previously reported data on Caucasian population, and no departures from Hardy-Weinberg equilibrium were detected.
2. 92 Paternity investigation cases were analyzed. One, two, or three mismatches in STR loci and in all VNTR loci were observed in exclusion cases-28-. The non-exclusion cases presented complete compatibility between the alleged father and the child in both systems. These results show both systems are suitable for paternity investigation in Argentine population.
3. VNTR regions are very discriminating tools and STR System provides a friendly and rapid method, which can be used to evaluate very small amounts of human DNA, even when is necessary to analyze degraded DNA templates.