TRIALLELIC PATTERNS FOUND IN DOMINICAN POPULATION IN REFERENCIA LABORATORIO CLÍNICO

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Introduction: Triallelic patterns are usually divided into two different categories depending on the heights of the peaks obtained: Type I and Type II. In Type I the sum of the heights of two of the peaks (alleles) observed are equivalent in size to the height of the third peak (allele). In Type II the heights of the three peaks (alleles) are the same size. We observed both patterns in our population, which are presented in this study.

Methods: Samples were obtained from individuals from the general population of the Dominican Republic, who came to our laboratory for routine Relationship Testing during 2009-2012. DNA was extracted from oral and blood stains collected in FTA™ paper using a Maxwell® 16 Instrument (Promega Corporation). Autosomal markers were amplified using a GeneAmp® PCR System 9700 (Applied Biosystems) with PowerPlex® 16HS System, PowerPlex® 18D System, or AmpFℓSTR® Identifiler® PCR Amplification Kit. The detection system was a 3130 Genetic Analyzer (Applied Biosystem). The data was analyzed using the GeneMapper® *ID* v3.2.1 or GeneMapper® *ID-X* v1.2 softwares.

Summary of Results: We found six samples with triallelic patterns in our laboratory. Of those samples four have Type II pattern and involve TPOX loci. The rest have Type I pattern. One involves THO1 loci with alleles 6, 7, 8, and the other one involves D16S539 with alleles 9, 12, 13. We have analyzed 2,831 samples, which represent 0.21% of triallelic patterns for the present study.

Conclusions: This is the first published data related to Type I triallelic pattern found in THO1 for alleles 6, 7, 8 and in D16S539, for alleles 9, 12, 13 in the Dominican population. We have found a similar frequency of triallelic patterns as reported in other population studies published. ⌘