

## MtDNA ANALYSIS OF PALEOINDIAN SETTLERS IN COLOMBIA

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Mitochondrial DNA analysis has revealed the existence of four haplotypes (A, B, C and D) in Amerindian samples. The oldest fossil registry in Colombia is dated 12000 ybp (years before present). We have analyzed the HV1 and HV2 mtDNA regions obtained from ancient human remains that belonged to hunters/gathers that inhabited the central plateau near Bogota, Colombia. The samples were found at several archeological sites such as Checua (8000ybp), Aguazuque (three samples dated 5075-2075 ybp), Herrera (2800 ybp), San Agustin (2800 ybp) and several Muisca sites (1200 to 500 ybp). In addition several samples from mummified tissue were also analyzed.

The mtDNA HV1 and HV2 regions were amplified with the F15989-H16410 and L29-H408 primer pairs. The amplified products were purified with Wizard® PCR preps (Promega Corporation, Madison WI). The sequencing reaction was carried out with CY5.5 labeled primers and the 7-Deaza-dGTP-thermosequenase cycle sequencing kit (Visible Genetics, Toronto, Canada) in both directions and analyzed in a MicroGene™ Blaster Automated sequencer (Visible Genetics, Toronto, Canada).

The mtDNA haplotype B and C associated polymorphisms were found in the Checua and Aguazuque samples, the oldest samples in our analysis (8000 to 2075 ybp). By 2800 ybp, haplotypes B, C and D were found (Herrera, Aguazuque and San Agustin). Haplotype D has been described in Brazil in ancient samples of similar age. For the most recent period, all four mtDNA haplotypes (A, B, C, and D) were found in the Muisca culture, the most important culture in the central plateau before the arrival of the Spanish colonizers.

Our results support the hypothesis of a discontinuous peopling process in the central plateau of Colombia and in particular suggest that Muisca Culture and the different groups that conformed the Chibcha speaking groups are the result of migrations from other continental regions.

