

## THE Y-HAPLOTYPES OF THE SOUTH DAKOTA NATIVE AMERICAN SIOUX

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In the last decade, much research, both anthropological and genetic, has been done with respect to the migration patterns of the ancient natives of the Americas. This has given the scientific community information regarding the movement of the ancient natives; but little research has focused on the tribes within North America and their relationship to each other. This study was conducted on the Y chromosome of seven tribal groupings of the Native American Sioux from South Dakota to provide both allelic frequency information as well as a searchable haplotypic database.

Two PCR multiplexes were utilized to amplify nineteen Y loci on 256 South Dakota male samples: 156 Native American Sioux and 100 Caucasian. The amplified samples were analyzed using an ABI PRISM® 310 Genetic Analyzer. Eleven test samples were also analyzed and demonstrated complete concordance; they had been previously characterized samples at the National Center of Forensic Science. The resulting data was used to create allelic "bins," frequency tables and haplotypes.

Differences in the allelic frequencies were noted between the two populations. Haplotypes were determined from each group; both demonstrated high diversity. The Native American Sioux samples had 129 unique haplotypes the Caucasians had 99 unique haplotypes. Interestingly, one haplotype was in common between the sampled Native American Sioux and Caucasians; the individuals had the same surname.