



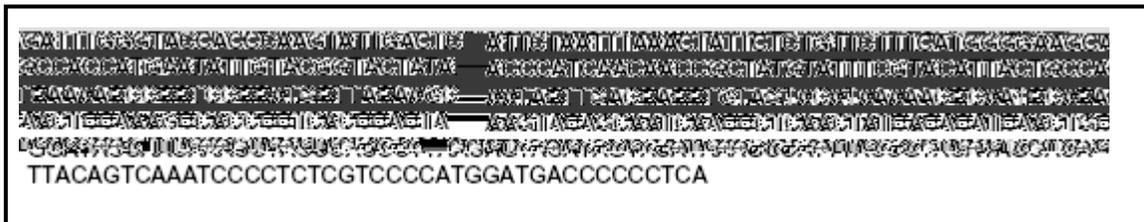
2XXXX-14

Jane Doe

The results of the mtDNA sequencing test for Jane Doe found differences with the Cambridge Reference Sequence at positions 16314 and 16356. The mtDNA sequence of Jane Doe. does not match sequences from the Native American database.

The mtDNA signature may be used to identify an individual and their direct maternal lineage. The mtDNA signature may also be helpful in identifying ethnic origins. A portion of the hypervariable region I (HVS1) from the DNA in the mitochondrial genome were amplified and sequenced from base pair positions 16100-16383. This sequence was then systematically compared to a database of HVSI sequences that match exactly or are one mutation step away from your HVSI sequence. This mtDNA sequence data was also compared to the Cambridge Reference Sequence (CRS). By comparing your sequence to the CRS we can identify the name of the lineage to which you belong. These lineages are called haplogroups. Any differences from the Cambridge Reference Sequence outside of the stated region will not be detected by using this test. This lineage information was then referenced with current mtDNA haplogroups and archaeological information sources to provide a description of the origins of the maternal line.

(nucleotide positions 16001-16383):



: You most probably belong to Haplogroup U4, a lineage most frequent in Central and South East Asia (see attached report). This genotyping would have to be confirmed through typing the hypervariable region II from the mtDNA. Current mtDNA haplogroup and archaeological information sources to provide a description of the origins of the maternal line are attached in a separate report.



Nearly all Native Americans belong to one of five mtDNA haplogroups: A, B, C, D or X which are broadly distributed throughout the Americas. All five haplogroups are observed in populations throughout the Americas and are also found in the three proposed Native American linguistic groups (Amerind, Na-Dene, Eskaleut). However, the original Na-Dene Indians and Eskimo-Aleuts appear to have lacked haplogroup B. Although mtDNAs from haplogroups A, B, C, D or X are often found together in a single population, many tribes lack at least one of these



haplogroups. Tribal isolation and founder effects may have led to the divergence of tribal gene pools in different regions.

Additional other mtDNAs have been detected in Amerindian tribes, all of which appear to have different genetic affinities. Because many Native populations exhibit European admixture in nuclear genetic studies, it seems likely that some of their “other” mtDNAs were acquired through gene flow with modern Europeans. Indeed, this does appear to be the case, as European haplogroup H and T mtDNAs are found in the Ojibwa, and European haplogroup H and J mtDNAs are seen in the Cherokee. There has also been some African gene flow into certain Amerindian populations, because Ab8(i)-1.2(xtur1.0005 Tc-0. dediwtiomn0003 Tw[anLthroughlogro8p H a.inghroughilIndobserva)-0.5





