

THE MITOCHONDRIAL DNA ANALYSIS TO DEMONSTRATE FAMILY GENEALOGY IN ANDIJAN REGION, CHEM VILLAGE

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Genealogy is the history of the past and present members of a family, and the tracing of their lineages. To develop the “family tree” the scientists use many different methods, including interview, analysis of historical documents, genetic analysis, and other methods to obtain information about a family and demonstrate kinship and pedigrees of its members.

Human DNA have large amount of information that has been passed down relatively unchanged from early ancestors. mtDNA variation is a main tool to unravel the past of modern humans because of absence of maternal inheritance, recombination and high evolutionary rate of the mitochondrial DNA. Over the past decades large numbers of sequences of the hypervariable regions I (HVR I and HVR II) of the mitochondrial control region, have been sequenced from different human populations. These studies have been used to infer conclusion on human migration patterns and its demographic history.

We plan to study individuals of Uzbek population from Andijan region using mtDNA sequence variation, particularly of the hypervariable region I. We will collect saliva samples from more than 10 people and extract DNA. Subsequent steps of our research will include PCR amplification, gel electrophoresis and sequencing of the HVR I region of mtDNA. Data collection and computer analysis will determine haplogroups existed in mtDNA and will determine genealogical relationships between selected individuals.