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Genetic investigation of archeological sites in Russia that can be associated with early Hungarians

Bea Szeifert[1,2], Veronika Csáky[2], Balázs Stégmár[1], Dániel Gerber[1,2], Balázs Gusztáv Mende[2], Attila Türk[3], Balázs Egyed[1] and Anna Szécsényi-Nagy[2]

[1] *Department of Genetics, Eötvös Loránd University, Budapest, Hungary*
[2] *Institute of Archaeology, Research Centre for the Humanities, Hungarian Academy of Sciences, Budapest, Hungary*
[3] *Department of Archaeology, Faculty of Humanities and Social Sciences, Pázmány Péter Catholic University, Budapest, Hungary*

Although linguists, historians, archaeologists have been researching it for a long time, the exact origin, route and chronology of the early Hungarians' migration is still unclear. According to our current knowledge the first relics from archaeological cultures that are most probably connected with Hungarians' ancestors were found in the Central and Southern Urals. The Hungarians migrated westwards from the Ural region through the Middle-Volga region and the East-European steppe, until they arrived in the Carpathian Basin around 895 AD.

Aiming to better understand the early Hungarians' origin and migration, our research group analyse medieval populations from the principal sites of the supposed migration. These populations are from diverse geographic locations (Ural region, Volga-Kama region) and represent different periods (6-12th AD) and cultures, but they have archaeological connection with each other and with the early Hungarians in the Carpathian Basin.

At the center of our ongoing investigations is the mitochondrial DNA. Our work ranges from sampling from archaic bones to the determination of the whole mitochondrial genomes by next generation sequencing and to the statistically and phylogenetically analysis of the data.

We observed in all tested populations (>70 individuals) both European and Asian mitochondrial haplogroups, but in different proportions. We compared statistically these medieval populations with other archaic and recent populations available in international databases. We detected genetic connections among the examined populations, but their level and extent is different. Some observed lineages have shown close or direct relations between and within the studied populations and even connected them to the Hungarian Conquerors in the Carpathian Basin.

Our preliminary results show that the investigated populations have important role in the Hungarian prehistory, whereas their analysis has revealed Central-and East-Asian relations that have not been genetically tested.

Keywords: *archaeogenetics, mitochondrial DNA, Hungarian prehistory*