

Section MOLECULAR ANTHROPOLOGY – NEW ADVANCES

THE GENE POOL OF INDIGENOUS CRIMEAN POPULATIONS: MEDITERRANEAN MEETS EURASIAN STEPPE

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Crimean Greeks are far descendants of Ancient Greek Colonists of Crimea and following Greeks migrants. The history of other ethnic group of the Crimean peninsula – Crimean Tatars – is linked with migrations of Eurasian steppe nomads in XIII century, which likely mixed with predating populations of Crimea. Three most informative modern genetic systems were used for the reliable reconstruction of ethnogenesis of these indigenous Crimean populations: 1) genome-wide autosomal SNP markers representing the genetic contribution of both parents; 2) mitochondrial DNA markers (maternal line); 3) Y-chromosomal markers (paternal line). We analyzed totally 400 DNA samples from unrelated male volunteers which representing three sub-ethnic groups of Crimean Tatars (Steppe, Mountain, Coastal) and two sub-ethnic groups of Crimean Greeks (Urums, Romeis). The results of uniparental markers analysis (multidimensional scaling, maps of genetics distances) coincided with that of biparental autosomal SNP markers (principal component and ADMIXTURE analyses). Gene pool of Steppe Crimean Tatars carries mainly the genetic component typical for Turkic populations from Eurasian steppe (Nogais, Uzbeks, Turkmens, Karakalpaks, Kazakhs, Kazan Tatars, Chuvashes). Another genetic component dominant in East Mediterranean peoples (especially, in Greeks and Turks) is mostly expressed in Mountain and Coastal Crimean Tatars and in both Crimean Greeks populations. No notable genetic similarity of indigenous Crimean populations with their closest geographical neighbors – Ukrainians and Russians – was revealed. It is the most likely that discovered features of Steppe Crimean Tatars gene pool reflect the genetic contribution of medieval Eurasian Steppe nomads. The component predominant in Mountain and Coastal Crimean Tatars gene pools and in Crimean Greeks suggests that genetic contribution of East Mediterranean populations continued in Crimea for many centuries. The work has been supported by RFBR grants 13-06-00670, 14-06-31331 and by grant from the Presidium of Russian Academy of Sciences “Dynamics and conservation of gene pools”.

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