

Gene Pool of Ethnic Groups of the Caucasus: Results of Integrated Study of the Y Chromosome and Mitochondrial DNA and Genome_Wide Data

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Abstract—Genetic diversity has been analyzed in 22 ethnic groups of the Caucasus on the basis of data on Y_chromosome and mitochondrial DNA (mtDNA) markers, as well as genome_wide data on autosomal sin_gle_nucleotide polymorphisms (SNPs). It has been found that the West Asian component is prevailing in all ethnic groups studied except for Nogays. This Near Eastern ancestral component has proved to be character_istic of Caucasian populations and almost entirely absent in their northern neighbors inhabiting the Eastern European Plain. Turkic_speaking populations, except Nogays, did not exhibit an increased proportion of Eastern Eurasian mtDNA or Y_chromosome haplogroups compared to some Abkhaz–Adyghe populations (Adygs and Kabardians). Genome_wide SNP analysis has also shown substantial differences of Nogays from all other Caucasian populations studied. However, the characteristic difference of Nogays from other popu_lations of the Caucasus seems somewhat ambiguous in terms of the R1a1a_M17(M198) and R1b1b1_M73 haplogroups of the Y chromosome. The state of these haplogroups in Turkic_speaking populations of the Caucasus requires further study.

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