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**Genetic Diversity and Population Structure of North
Ossetia-Alania Ossetians: Insights from Nuclear DNA
Marker Polymorphism in the Context of European
and Caucasian Populations of Russia**

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ABSTRACT This study aims to characterize the genetic diversity within the Ossetian population of the republic of the North Ossetia-Alania (RNO-Alania) and elucidate its differentiation against the broader genetic landscape of the peoples of the Russian Federation. Allele frequencies for 10 highly polymorphic nuclear DNA markers (CCR5Δ32, ID/ACE, D7S23 (KM19), STR/TH01, STR/FABP2, STR/IVS6aGATT (CFTR), VNTR/PAH, VNTR/DAT1, VNTR/NOS3, VNTR/APOB) were investigated in 370 unrelated Ossetians. Wright's F_{st} was compared with that for Tatars, Bashkirs, Udmurts, Chuvash, Mari, Karachays, Abazins, Nogais, Circassians, Kumyks, and Russians from Tver, Kirov, and Rostov regions. Within Ossetians, Irons and Digors showed the closest relationship with Kudars exhibiting greater differences from both groups. The Ossetian population formed a cohesive cluster with other North Caucasus populations, while Kumyks of the RNO-Alania displayed a more significant genetic difference. Comparative analysis with 11 previously studied populations resulted in a dendrogram highlighting two clusters – “Volga–Ural region” and “Caucasian.”