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East Eurasian ancestry in the middle of Europe: Genetic footprints of Steppe nomads in the genomes of Belarusian Lipka Tatars

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Abstract

Medieval era encounters of nomadic groups of the Eurasian Steppe and largely sedentary East Europeans had a variety of demographic and cultural consequences. Amongst these outcomes was the emergence of the Lipka Tatars—a Slavic-speaking Sunni-Muslim minority residing in modern Belarus, Lithuania and Poland, whose ancestors arrived in these territories via several migration waves, mainly from the Golden Horde. Our results show that Belarusian Lipka Tatars share a substantial part of their gene pool with Europeans as indicated by their Y-chromosomal, mitochondrial and autosomal DNA variation. Nevertheless, Belarusian Lipkas still retain a strong genetic signal of their nomadic ancestry, witnessed by the presence of common Y-chromosomal and mitochondrial DNA variants as well as autosomal segments identical by descent between Lipkas and East Eurasians from temperate and northern regions. Hence, we document Lipka Tatars as a unique example of former Medieval migrants into Central Europe, who became sedentary, changed language to Slavic, yet preserved their faith and retained, both uni- and bi-parentally, a clear genetic echo of a complex population interplay throughout the Eurasian Steppe Belt, extending from Central Europe to northern China.

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