

The *rs12255372* and *rs7903146* polymorphisms
of the *TCF7L2* gene among Buryats and
Russians of Eastern Siberia.

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The objective of the present study was to investigate the polymorphism of metabolism genes in indigenous populations of Siberia. To this end, we have studied the ethnic features of allele frequency distribution for polymorphic variants in gene *TCF7L2 G103894T* (*rs12255372*) and *C53341T* (*rs7903146*) in the samples taken from Buryats, and Russians of Eastern Siberia, and compared it with data on world populations. Samples of Eastern (N = 132) and Western (N = 278) Buryats, Russians (N = 122) and persons of mixed Buryat-Russian origin (N = 56) were genotyped by real-time PCR using competitive TaqMan- probes. Genotype distribution for polymorphic loci in samples of Buryats, their metis, and Russians from Eastern Siberia is presented in Table 1. Compared to the Russians, the Buryats showed a statistically significantly lower incidence of the *TCF7L2 103894T* and *TCF7L2 53341T* alleles associated with metabolic diseases and Type 2 diabetes mellitus (T2DM). Buryats are intermediate between Caucasian and East Asian populations. This agrees with the lower susceptibility of Buryats to metabolic disorders compared to the Caucasian population described in the literature. Intermediate frequencies alleles in the group of mixed origin may indicate a higher risk of the associated metabolic disorders in the descendants of mixed marriages compared to the Buryats.

**TABLE 1. GENOTYPE DISTRIBUTION FOR *TCF7L2*
G103894T (*rs12255372*) AND *TCF7L2* *C53341T*
(*rs7903146*) AND ALLELE FREQUENCIES IN SAMPLES OF
BURYAT, THEIR METIS AND RUSSIANS FROM EASTERN
SIBERIA**

Population			Eastern Buryats	Western Buryats	Metis	Russians
<i>G103894T</i>	Genotype count	<i>G/G</i>	116	251	45	73
		<i>G/T</i>	15	24	8	40
		<i>T/T</i>	0	3	2	7
	N, ppl		131	278	55	120
	P (H-W)		0,905	0,668	0,654	0,628
	<i>103894T</i> frequency, %		5,7	5,4	10,9	22,5
<i>C53341T</i>	Genotype count	<i>C/C</i>	119	225	49	70
		<i>C/T</i>	13	49	7	44
		<i>T/T</i>	0	2	0	8
	N, ppl		132	276	56	122
	P (H-W)		0,925	0,932	0,926	0,449
	<i>53341T</i> frequency, %		4,9	9,6	6,3	24,6

N is the sample size, P (H-W) is the probability of deviation from the Hardy-Weinberg equilibrium, metis are the descendants of mixed Russian-Buryat marriages

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