

FOR THE RECORD

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Allele Frequencies for the PowerPlex™ 16 STR Loci in an Albanian Population Sample from Northern Italy

Population: Albanians residing in North West Italy (Piedmont)

KEYWORDS: forensic science, DNA typing, population genetics, short tandem repeats, polymerase chain reaction, D3S1358, TH01, D21S11, D18S51, PENTA E, D5S818, D13S317, D7S820, D16S539, CSF1PO, PENTA D, vWA, D8S1179, TPOX, FGA, Italy, Albanians

In recent years Italy experienced a strong migration flow from Albania: a STR reference database, to be used in forensic case-work, was created for the Albanian population. Blood/saliva samples were obtained from 100 unrelated Albanians residing in Piedmont (North West Italy). Genomic DNA was isolated from blood by the Chelex method (1) and from saliva by standard organic phenol/chlorophorm extraction. PCR amplification was performed according to the manufacturer's instructions, using the GenePrint®

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PowerPlex™ 16 System (Promega Corporation, Madison, WI). The amplified products were detected with the 310 Genetic Analyzer (Perkin-Elmer, Foster City, CA). Hardy-Weinberg equilibrium was evaluated by exact test using the software GENEPOP Version 3.2a (2). The complete data are available to any interested researcher at <http://medicina.medfarm.unito.it/dipart/dafml/torre/databasealbanians.htm>

References

1. Walsh PS, Metzger DA, Higuchi R. Chelex 100 as a medium for simple extraction of DNA for PCR-based typing from forensic material. *Biotechniques* 1991;10:506-13.
2. Raymond M, Rousset F. GENEPOP (version 1.2): population genetics software for exact tests and ecumenicism. *J Heredity* 1995;86:248-9.

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TABLE 1—Observed allele frequencies in the Albanian population (n = 100).

Allele	D3S1358	TH01	D21S11	D18S51	Penta E	D5S818	D13S317	D7S820	D16S539	CSF1PO	Penta D	vWA	D8S1179	TPOX	FGA
5					.065										
6		.295													.005
7		.135			.155			.005							
8		.090			.040		.120	.215	.025	.005	.025		.040		.535
9		.255			.030	.015	.075	.130	.100	.015	.220		.010		.130
9.3		.215													
10		.010		.005	.115	.065	.120	.300	.055	.240	.140		.080		.030
11				.005	.090	.370	.320	.195	.380	.360	.155		.040		.275
12				.100	.165	.395	.255	.140	.300	.300	.110		.110		.025
13				.160	.120	.150	.080	.015	.110	.060	.250		.340		
14	.060			.200	.065		.025		.030	.015	.070	.090	.215		
15	.335			.165	.025	.005	.005			.005	.020	.095	.135		
16	.250			.160	.035						.005	.200	.020		
17	.145			.065	.020						.005	.265	.010		
18	.180			.065	.020							.245			.025
19	.030			.020	.025							.085			.070
20				.020	.030							.020			.130
21				.030											.115
21.2															.005
22				.005											.150
23															.160
24															.195
24.2															.010
25															.110
26			.005												.025
27			.010												
28			.170												
29			.290												.005
29.2			.005												
30			.150												
30.2			.045												
31			.050												
31.2			.110												
32			.015												
32.2			.100												
33.2			.045												
34.2			.005												
P*	.282	.517	.400	.675	.667	.666	.670	.247	.145	.558	.468	.790	.247	.866	.126

* Probability value of exact test based on 5000 dememorization steps, 1000 batches and 1000 iterations per batch.