

## FOR THE RECORD

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# Population Data for the D5S818, D13S317, D7S820 and D16S539 STR Loci in a Romanian Population Sample

**POPULATION:** Caucasian Romanians residing in the Timis County, Romania

**KEYWORDS:** forensic science, STR loci, DNA typing, Romanian population data, population genetics, Timis County, Romania, D5S818, D13S317, D7S820, D16S539

Whole blood was collected from 200 unrelated Caucasian Romanians under informed consent. DNA was extracted using the QIAamp<sup>®</sup> DNA Mini Kit (QIAGEN, Valencia, CA) following manufacturer's instructions. PCR for the four STR loci included in the Gamma STR<sup>®</sup> Fluorescein multiplex kit (Promega Corporation, Madison, WI) was performed according to manufacturer's instructions. The amplicons were analyzed on a 3730 DNA Analyzer (Applied Biosystems, Foster City, CA). Allele designation was made by comparison with the sequenced allelic ladders provided in the kit using the GeneMapper<sup>™</sup> v3.5 (Applied Biosystems, Foster City, CA) software.

Allele frequencies for each locus were calculated from the genotype counts in the sample population using the gene count method. The heterozygosity test and exact test were used to detect departures from Hardy-Weinberg expectations at any of the four loci (1,2). The power of discrimination and probability of exclusion were estimated according to Fisher (3). Allelic frequencies and statistic parameters of forensic interest are presented in Table 1. Genotype distributions for these loci did not deviate significantly from Hardy-Weinberg equilibrium expectations. Based on these data, the four loci are useful as genetic markers for human population studies and are reliable for forensic identification purposes for the Romanian population.

The complete data are available upon request at [cmarian@umft.ro](mailto:cmarian@umft.ro).

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TABLE 1—Allelic frequencies distribution and statistical parameters for the investigated loci.

Allele	D5S818	D13S317	D7S820	D16S539
7	0.0025	...	0.0175	...
8	...	0.1625	0.1950	0.0175
9	0.0275	0.1125	0.1450	0.1175
10	0.0850	0.0475	0.2475	0.0525
11	0.3075	0.3300	0.2250	0.2575
12	0.3725	0.2425	0.1450	0.2950
13	0.1950	0.0700	0.0175	0.2300
14	0.0075	0.0350	0.0075	0.0300
15	0.0025	...	...	...
H	0.7900	0.7500	0.8000	0.7200
PD	0.8544	0.9178	0.9306	0.9163
PE	0.4771	0.5876	0.6153	0.5643
P	0.247	0.023	0.126	0.013
P*	0.033	0.204	0.735	0.050

H: Observed heterozygosity; PD: Power of discrimination; PE: Power of exclusion; P: p value for Hardy-Weinberg equilibrium exact test; P\*: p value for Hardy-Weinberg equilibrium homozygosity test.

## References

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