

## SHORT COMMUNICATION

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**Allele frequencies for the VNTR locus D17S5 (YNZ22) in Hungary**

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**Abstract** A population genetic study for the locus D17S5 was carried out on Caucasoids from the Budapest area consisting of 209 unrelated individuals. In this system we identified 13 different alleles and 51 genotypes. No new alleles were found and no significant deviation from Hardy-Weinberg equilibrium was observed. The power of discrimination was estimated at 0.958, the power of exclusion at 0.60 and the observed heterozygosity at 0.80.

**Key words** Population genetics · AMPFLP · D17S5 · YNZ22 · Hungarian population

**Introduction**

In this study we present the allele frequencies and efficiency values for the D17S5 (YNZ 22) locus in a sample of 209 unrelated Caucasoids from the Budapest area.

**Materials and methods**

DNA for PCR analysis was obtained from whole blood of 209 unrelated individuals as previously described (Brinkmann et al. 1991). Amplification and typing were performed using previously described methods (Rand et al. 1992) and according to the manufacturers' instructions (Serac, Germany). The statistical analysis was performed as recommended in previous studies (Buscemi et al. 1994; Fisher 1951; Guo and Thompson 1992; Nei and Roychoudhury 1974).

**Results and discussion**

A total of 13 different alleles and 51 genotypes were observed in 209 individuals. The most common alleles were 4 ( $f = 0.251$ ), 2 ( $f = 0.227$ ) and 3 ( $f = 0.129$ ). No new alleles were found and the genotype 2–4 was the most frequent ( $f = 0.095$ ).

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**Table 1** Frequency distribution of YNZ22 system alleles in a population sample of 209 unrelated Caucasoids from the Budapest area

| Allele | YNZ22<br><i>n</i> = 209 |
|--------|-------------------------|
| 1      | 0.093                   |
| 2      | 0.227                   |
| 3      | 0.129                   |
| 4      | 0.251                   |
| 5      | 0.053                   |
| 6      | 0.029                   |
| 7      | 0.017                   |
| 8      | 0.043                   |
| 9      | 0.050                   |
| 10     | 0.079                   |
| 11     | 0.014                   |
| 12     | 0.007                   |
| 13     | 0.007                   |

Heterozygosity obs. ( $n = 168$ ) = 0.803  
Power of discrimination = 0.958  
Power of exclusion obs. = 0.606  
Exact test,  $P$ -value = 0.294

(Table 1). The allele frequencies found in the Budapest area are similar to other Caucasoid population data (Arroyo et al. 1996; Buscemi et al. 1994; Gene et al. 1995; Rand et al. 1992) and no significant deviation from Hardy-Weinberg equilibrium was observed (exact test  $P$ -value 0.29). The power of discrimination was estimated at 0.958, the power of exclusion at 0.60 and the observed heterozygosity at 0.80. According to the statistical parameters this highly polymorphic system is a powerful tool for personal identification and paternity testing.

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