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FOR THE RECORD

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Genetic Polymorphisms of 15 STR Loci in Chinese Hui Population

POPULATION: Chinese Hui population

KEYWORDS: forensic science, DNA typing, population genetics, AmpFℓSTR Identifiler kit, GeneScan, Chinese Hui population, China

The blood samples were obtained from 100 unrelated individuals of Chinese Hui population living in Ningxia province with known ancestor until at least the third generations. Genomic DNA was extracted using the Chelex-100 protocol as described by Walsh et al. (1). 15 STRs loci were co-amplified by using the AmpFLSTR Identifiler kit following the amplification conditions recommended by the manufacturer. All loci were amplified in GeneAmp PCR System 9700 (PE Applied Biosystem). Detection and genotyping of all PCR products were accomplished using ABI3100 DNA Genetic Analyzer (Applied Biosystem). Allele designation was done using GeneScan3.7 and Genotyper3.7. Evaluation of Hardy–Weinberg equilibrium expectations was carried out using the exact test and further statistical parameters of forensic interest were determined by using Arlequin version1.1 (2). Table 1 showed allele frequencies of 15 STR loci of Chinese Hui ethnic group. Table 2 showed statistical parameters of the 15 STR loci for forensic interest. The observed genotype frequencies and expected of genotype frequencies were evaluated by χ2-test and the heredity of all STR loci were followed the Hardy-Weinberg equilibrium ($p > 0.05$).

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References

1. Walsh PS, Metzger DA, Higuchi R. Chelex 100 as a medium for simple extraction of DNA for PCR-based from forensic material, Biotechniques 1991;10:506–13. [PubMed]
2. Schneider S, Roessli SD, Excoffier L. A software for population genetics data analysis, Arlequin version 2.0, Geneva, Switzerland: Genetic and Biometry Laboratory, University of Geneva, Switzerland, 2000.

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TABLE 1—*Allele frequencies of 15 STR loci of Chinese Hui population (n = 100).*

Allele	D3S1358	vWA	FGA	TH01	TPOX	CSF1PO	D5S818	D13S317	D16S539	D8S1179	D21S11	D18S51	D2S1338	D19S433	D7S820
5															
6				0.130											
7				0.225		0.005	0.015								0.005
8				0.105	0.610	0.010	0.005	0.225	0.015	0.005					0.160
9				0.475	0.140	0.045	0.100	0.150	0.295						0.065
9.3				0.040											
10				0.025		0.245	0.115	0.130	0.105	0.120					0.175
11				0.130	0.240	0.280	0.320	0.275	0.230	0.085					0.305
12					0.010	0.345	0.265	0.160	0.215	0.145		0.065		0.055	0.230
12.2														0.010	
13	0.010	0.005				0.065	0.155	0.050	0.135	0.165		0.190		0.275	0.055
13.2														0.055	
14	0.035	0.170				0.005	0.015	0.010	0.005	0.200		0.240		0.290	0.005
14.2												0.005		0.090	
15	0.345	0.045								0.175		0.090		0.065	
15.2														0.085	
16	0.330	0.220					0.010			0.080		0.185	0.010	0.040	
16.2														0.025	
17	0.185	0.225	0.005							0.015		0.105	0.085		
17.2														0.010	
18	0.090	0.190	0.020							0.010		0.055	0.075		
19	0.005	0.145	0.040									0.045	0.135		
20			0.070									0.005	0.150		
21			0.100									0.015	0.030		
22			0.175										0.025		
23			0.235										0.250		
24			0.205										0.165		
25			0.085										0.060		
26			0.045										0.015		
27			0.015								0.005				
28											0.070				
28.2											0.020				
29											0.290				
29.2											0.005				
30											0.265				
30.2			0.005								0.015				
31											0.105				
31.2											0.065				
32											0.015				
32.2											0.095				
33.2											0.040				
34.2											0.010				
35.2											0.005				

TABLE 2—*Statistical parameters of the 15 STR loci for forensic interest (n = 100).*

Locus	H	PIC	DP	PEE	*p*
D3S1358	0.728	0.694	0.864	0.596	0.083
vWA	0.813	0.803	0.995	0.730	0.355
FGA	0.846	0.836	0.955	0.838	0.754
THO1	0.694	0.685	0.856	0.752	0.734
TPOX	0.551	0.534	0.731	0.329	0.136
CSF1PO	0.736	0.707	0.888	0.635	0.081
D5S818	0.779	0.758	0.911	0.702	0.388
D13S317	0.806	0.796	0.929	0.752	0.734
D7S820	0.791	0.774	0.924	0.736	0.118
D16S539	0.784	0.775	0.992	0.727	0.443
D8S1179	0.853	0.846	0.957	0.839	0.379
D21S11	0.819	0.818	0.938	0.785	0.153
D18S51	0.843	0.838	0.955	0.835	0.222
D19S433	0.812	0.809	0.935	0.777	0.812
D2S1338	0.851	0.846	0.955	0.838	0.256