FOR THE RECORD

Jing Yan, Ph.D.; Weiiuan Zhang, M.D.; Jin Wu, M.D.; Yingbi Li, M.D.; Ji Zhang, Ph.D.; and Yi ping Hou, M.D.

Genetic Polymorphism of Two Novel STR Loci AY639920 and AY639923 in a Chinese Population

POPULATION: Chinese.

KEYWORDS: forensic science, Han in Sichuan, China, DNA typing, short tandem repeats, polymerase chain reaction, population genetics, AY639920, AY639923

Blood samples were collected from unrelated individuals of the Chinese Han ethnic group in Chengdu of China. DNA was extracted using the Chelex method (1). PCR amplification conditions can be accessed at http://www.legalmed.org/dna/AY639920.htm and http://www.fayi.cn/dna/AY639920.htm. The volume of PCR reaction for each locus was 37.5 μL . The PCR products were analyzed by vertical nondenaturing polyacrylamide gel electrophoresis with a continuous buffer system and visualized by silver staining (2,3). Data were analyzed using POWERSTATS program (4). The genotype distribution was analyzed for Hardy–Weinberg equilibrium according to Hou's method (5) and no deviation from Hardy–Weinberg equilibrium was observed (Tables 1 and 2).

The complete data can be accessed at http://www.legalmed.org/dna/AY639920.htm and http://www.fayi.cn/dna/AY639920.htm.

TABLE 1—Allele frequencies of two STR loci in Chinese population.

AY6399	N = 105	AY639923 $(N = 101)$		
Allele	Frequency	Allele	Frequency	
11	27.6%	14	1.5%	
14	1.4%	15	7.4%	
15	5.7%	16	30.2%	
16	2.9%	17	39.6%	
17	48.6%	18	11.9%	
18	8.1%	19	8.9%	
19	5.2%	20	0.5%	
20	0.5%			
Total	1.000	Total	1.000	
HWE*	p > 0.05		p > 0.05	

^{*}Test for Hardy-Weinberg equilibrium.

TABLE 2—Population genetics and forensic data of two STR loci.

Locus	PIC	DP	P_{m}	CE	$H_{\rm o}$	H_{e}
AY639920	0.630	0.845	0.155	0.291	0.600	0.677
AY639923	0.680	0.883	0.117	0.497	0.743	0.731

PIC, polymorphism information content; DP, power of discrimination; $P_{\rm m}$, probability of match; $H_{\rm o}$, observed heterozygosity; $H_{\rm e}$, expected heterozygosity.

References

- Walsh BS, Petzger DA, Higuchi R. Chelex-100 as medium for simple extraction of DNA for PCR-based typing from forensic material. Biotechniques 1991;10:506–10.
- Hou Y, Zhang J, Li YB, Wu J, Zhong SZ, Prinz M. Allele sequences of six new Y-STR loci and haplotypes in the Chinese Han population. Forensic Sci Int 2001;118:147–52.
- Allen CR, Graves G, Budowle B. Polymerase chain reaction amplification products separated on rehydratable polyacrylamide gels and stained with silver. Biotechniques 1990;7:736–44.
- 4. http://www.promega.com
- Hou Y, Prinz M, Staak M. Comparison of different tests for deviation from Hardy–Weinberg equilibrium of AMPFLP population data. In: Bar W, Fiori A, Rossi U, editors. Advances in forensic haemogenetics 5. Berlin: Springer-Verlag, 1994:511–4.

Additional information and reprint requests:

Hou Yi Ping, M.D.

Institute of Forensic Medicine

Sichuan University (West China University of Medical Sciences)

Chengdu 610041, Sichuan

China

E-mail: forensic@mail.sc.cninfo.net

¹Institute of Forensic Medicine, Sichuan University (West China University of Medical Sciences), Chengdu 610041, Sichuan, China.