FOR THE RECORD

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DNA Polymorphism Study at D2S1328 and D11S1986 in Chinese Population

POPULATION: Chinese

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

| Allele | D2S1328 (N = 110) | D11S1986 (N = 109) |
|--------|------------------|------------------|
| 8      | 0.005            |                   |
| 9      | 0.560            |                   |
| 10     | 0.138            | 0.096            |
| 11     | 0.128            | 0.110            |
| 12     | 0.055            | 0.170            |
| 13     | 0.037            | 0.087            |
| 14     | 0.055            | 0.092            |
| 15     | 0.023            | 0.037            |
| 16     | 0.119            | 0.119            |
| 17     | 0.220            | 0.220            |
| 18     | 0.037            | 0.037            |
| 19     | 0.032            | 0.032            |
| Total  | 1.000            | 1.000            |
| HWE*   | P > 0.05         | P > 0.05         |

* Test for Hardy-Weinberg equilibrium.

Blood samples were collected from unrelated individuals of Chinese Han ethnic group in Chengdu of China. DNA was extracted using Chelex method (1). PCR amplification conditions can be accessed at http://www.legalmed.org/dna/D2S1328.htm. The volume of PCR reaction for each locus was 20 µL. The PCR products were analyzed by horizontal non-denaturing polyacrylamide gel electrophoresis with discontinuous buffer system and visualized by silver staining (2). Data of population genetics and forensic science were analyzed using POWERSTATS program (3). The genotype distribution was analyzed for Hardy-Weinberg equilibrium according to Hou’s method (4). No deviation from Hardy-Weinberg equilibrium was observed. The complete data can be accessed at http://www.legalmed.org/dna/D2S1328.htm.

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

| Locus   | PIC  | PD   | Pm   | PE   | Ho   | He   |
|---------|------|------|------|------|------|------|
| D2S1328 | 0.62 | 0.843| 0.157| 0.37 | 0.661| 0.958|
| D11S1986| 0.85 | 0.959| 0.041| 0.812| 0.909| 0.912|

PIC: polymorphism information content; PD: power of discrimination; Pm: probability of match; PE: power of Exclusion; Ho: observed heterozygosity; He: expected heterozygosity.

References

1. 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. [PubMed]
2. 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.
3. http://www.promega.com
4. 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. Berlin: Springer-Verlag, 1994:511–4.

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