# FOR THE RECORD

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# Allele Frequency Distributions for 15 STR Loci in Chinese Chengdu Han Population

**POPULATION:** Han population living in Chengdu China

**KEYWORDS:** forensic science, DNA typing, Han population, VWA, CFS1PO, D2S1338, D3S1358, D5S818, D7S820, D8S1179, D13S317, D16S539, D18S51, D19S433, D21S11, FGA, TH01, TPOX

This study was to provide a 15 STRs database for a population sample of Chengdu, China for the use as a highly discriminatory system of genetic markers in forensic community. Whole blood specimens obtained by venipuncture was collected in EDTA vacutainer tubes from unrelated volunteer donors living in Chengdu, China. DNA was extracted using Chelex-100 and proteinase K (1). The multiplex amplified of all 15 STR loci was performed using commercially available multiplex kit AmpF$\ell$STR® IdentifilerTM (Applied Biosystems). Genotyping was performed using a 310 ABI Prism Genetic Analyzer. The forensic efficiency parameters were calculated by the Promega Software, POWERSTATS(www.promega.com/techserv/apps).

Hardy-Weinberg equilibrium test of all 15 loci were based on the Chi-square test. The combined values of the matching probability and the power of exclusion are $3.52 \times 10^{-17}$ and 99.9999, respectively.

All data are available upon request at: kjc@scu.edu.cn

### Reference

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TABLE 1—*Allele frequencies in the Han population in Chengdu, China.*

| Allele | VWA | CFS1PO | D2S1338 | D3S1358 | D5S818 | D7S820 | D8S1179 | D13S317 | D16S539 | D18S51 | D19S433 | D21S11 | FGA | TH01 | TPOX |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Frequency | | | | | | | |
| 6 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0.065 | ... |
| 7 | ... | ... | ... | ... | 0.032 | 0.005 | 0.002 | 0.002 | ... | ... | ... | ... | ... | 0.304 | ... |
| 8 | ... | 0.014 | ... | ... | ... | 0.159 | ... | 0.308 | 0.007 | ... | ... | ... | ... | 0.065 | 0.493 |
| 9 | ... | 0.113 | ... | ... | 0.054 | 0.068 | 0.002 | 0.137 | 0.282 | 0.006 | ... | ... | ... | 0.493 | 0.155 |
| 9.2 | ... | ... | ... | ... | ... | 0.003 | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| 9.3 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0.036 | ... |
| 10 | ... | 0.176 | ... | ... | 0.163 | 0.122 | 0.111 | 0.107 | 0.155 | 0.009 | ... | ... | ... | 0.036 | 0.049 |
| 11 | 0.007 | 0.204 | ... | ... | 0.320 | 0.383 | 0.101 | 0.269 | 0.275 | 0.003 | ... | ... | ... | ... | 0.289 |
| 12 | 0.007 | 0.352 | ... | 0.013 | 0.276 | 0.227 | 0.113 | 0.124 | 0.162 | 0.038 | 0.057 | ... | ... | ... | 0.014 |
| 13 | 0.002 | 0.120 | ... | 0.018 | 0.153 | 0.021 | 0.187 | 0.040 | 0.106 | 0.175 | 0.409 | ... | ... | ... | ... |
| 13.2 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0.034 | ... | ... | ... | ... |
| 14 | 0292 | 0.021 | ... | 0.033 | ... | 0.013 | 0.207 | 0.012 | 0.014 | 0.160 | 0.170 | ... | ... | ... | ... |
| 14.2 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0.148 | ... | ... | ... | ... |
| 15 | 0.040 | ... | ... | 0.321 | 0.002 | ... | 0.200 | ... | ... | 0.148 | 0.080 | ... | ... | ... | ... |
| 15.2 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0.080 | ... | ... | ... | ... |
| 16 | 0.191 | ... | 0.024 | 0.354 | ... | ... | 0.059 | ... | ... | 0.154 | ... | ... | ... | ... | ... |
| 16.2 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0.011 | ... | ... | ... | ... |
| 17 | 0.188 | ... | 0.083 | 0.195 | ... | ... | 0.012 | ... | ... | 0.071 | 0.011 | ... | 0.003 | ... | ... |
| 18 | 0.171 | ... | 0.190 | 0.059 | ... | ... | 0.005 | ... | ... | 0.050 | ... | ... | 0.036 | ... | ... |
| 19 | 0.092 | ... | 0.119 | 0.008 | ... | ... | ... | ... | ... | 0.080 | ... | ... | 0.044 | ... | ... |
| 20 | 0.010 | ... | 0.119 | ... | ... | ... | ... | ... | ... | 0.041 | ... | ... | 0.044 | ... | ... |
| 21 | ... | ... | 0.024 | ... | ... | ... | ... | ... | ... | 0.033 | ... | 0.003 | 0.103 | ... | ... |
| 21.2 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0.003 | ... | ... |
| 22 | ... | ... | 0.071 | ... | ... | ... | ... | ... | ... | 0.015 | ... | ... | 0.205 | ... | ... |
| 23 | ... | ... | 0.155 | ... | ... | ... | ... | ... | ... | 0.015 | ... | ... | 0.187 | ... | ... |
| 23.2 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0.010 | ... | ... |
| 24 | ... | ... | 0.119 | ... | ... | ... | ... | ... | ... | 0.003 | ... | ... | 0.226 | ... | ... |
| 24.2 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0.010 | ... | ... |
| 25 | ... | ... | 0.060 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0.095 | ... | ... |
| 25.2 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0.003 | ... | ... |
| 26 | ... | ... | 0.012 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0.026 | ... | ... |
| 27 | ... | ... | 0.024 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0.008 | ... | ... |
| 28 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0.050 | ... | ... | ... |
| 29 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0.243 | ... | ... | ... |
| 29.2 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0.003 | ... | ... | ... |
| 30 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0.290 | ... | ... | ... |
| 30.2 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0.015 | ... | ... | ... |
| 31 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0.078 | ... | ... | ... |
| 31.2 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0.075 | ... | ... | ... |
| 32 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0.038 | ... | ... | ... |
| 32.2 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0.138 | ... | ... | ... |
| 33 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0.008 | ... | ... | ... |
| 33.2 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0.058 | ... | ... | ... |
| 34.2 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0.005 | ... | ... | ... |
| n | 202 | 142 | 168 | 145 | 203 | 192 | 203 | 201 | 142 | 169 | 176 | 200 | 195 | 138 | 142 |
| H (%) | 76.7 | 80.3 | 92.9 | 76.4 | 75.4 | 74.5 | 84.2 | 80.1 | 77.5 | 82.8 | 75.0 | 83.5 | 85.6 | 63.8 | 62.0 |
| MP | 0.068 | 0.099 | 0.051 | 0.131 | 0.096 | 0.100 | 0.047 | 0.078 | 0.087 | 0.031 | 0.095 | 0.058 | 0.047 | 0.177 | 0.180 |
| PE | 0.540 | 0.604 | 0.854 | 0.534 | 0.516 | 0.501 | 0.680 | 0.601 | 0.533 | 0.653 | 0.510 | 0.666 | 0.708 | 0.339 | 0.315 |
| PD | 0.932 | 0.901 | 0.949 | 0.869 | 0.904 | 0.900 | 0.953 | 0.922 | 0.913 | 0.969 | 0.905 | 0.942 | 0.953 | 0.823 | 0.820 |
| *P* | | | | | | | | >0.05 | | | | | | | |

H: heterozygosity; MP: matching probability; PE: power of exclusion; PD: power of discrimination.