Asian on-line Y-STR Haplotype Reference Database

Lessig, R.¹, Willuweit, S.², Krawczak, M.³, Wu, F.⁴, Pu, C.⁴, Kim, W.⁵, Henke, L.⁶, Henke, J.⁶, Miranda, J.⁷, Hidding, M.⁷, Benecke, M.⁷, Schmitt, C.⁷, Magno, M.⁸, Calacal, G.⁸, Delfin, F.⁸, De Ungria, M.⁸, Elias, S.⁹, Augustin, C.¹⁰, Tun, Z.¹¹, Honda, K.¹¹, Kayser, M.¹², Gusmao, L.¹³, Amorim, A.¹³, Alves, C.¹³, Hou, Y.¹⁴, Keyser, C.¹⁵, Ludes, B.¹⁵ and Roewer, L.²

¹² Max-Planck-Institute of Evolutionary Anthropology, Leipzig, Germany

(in press). For several years, Y-chromosomal microsatellites (STRs) have become well-established in forensic practice. In this context, the unique genetic characteristics of the Y chromosome (i.e. its paternal inheritance and lack of recombination) render Y-STRs particularly powerful. Notably, genetic differences between male populations appear to be greater for Y-STRs compared to autosomal STRs that may be due to the sensitivity of Y-chromosomal lineages to genetic drift [5]. Assessment of match probabilities amongst males or traces/persons requires the analyses of a large number of haplotypes in reference populations. Haplotype data of a large number of European as well as North and South American populations are available online (Y-STR Haplotype Reference Database –YHRD; www.ystr.org). The most recent multi-center effort has led to the establishment of an Asian YHRD (www.ystr.org/asia) which was made available in January 2002. All databases are maintained at the Institute of Legal Medicine, Humboldt-University, Berlin and will soon be fused with a global repository of Y haplotypes that include populations from all continents.

KEYWORDS

Y-chromosome, STR, Y-Haplotype Reference Database (YHRD), Population genetics

¹ University of Leipzig, Institute of Legal Medicine, Leipzig, Germany

² Humboldt-University Berlin, Institute of Legal Medicine, Germany

³ Institut für Medizinische Informatik und Statistik, University Kiel, Germany

⁴ Scientific and Technical Research Center, Ministry of Justice, Hsin-Tien City, Taipei County, Taiwan, ROC

⁵ Department of Biology, Dankook University, Cheonan, South Korea

⁶ Institut für Blutgruppenforschung, Institut Köln, Germany

⁷ University Cologne, Institute of Legal Medicine, Germany

⁸ Natural Sciences Research Institute, University of the Philippines, Quezon City, Philippines

⁹ University of Damaskus, Institute of Legal Medicine, Syria

¹⁰ University Hamburg, Institute of Legal Medicine, Germany

¹¹ Department of Legal Medicine, University of Tsukuba, Tsukuba City, Ibaraki, Japan

¹³ Instituto de Patologia e Imunologia da Universidade do Porto (IPATIMUP), Porto, Portugal

¹⁴ Institute of Forensic Medicine, West China University of Medical Sciences, Chengdu, P.R. China

¹⁵ Institut de Médecine Légale, 67085 Strasbourg, France