



Announcement of Population Data

Haplotype data for 12 Y-chromosome STR loci of Sri Lankans

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ABSTRACT

Haplotype data estimated from 12 Y-chromosomal STRs were obtained from a sample of 207 unrelated male individuals from Sri Lanka. A total of 195 different haplotypes were identified, of which 183 were unique. Haplotype diversity was found to be high (0.9948 ± 0.0012) indicating increased discriminating capacity of these 12 Y-STR loci in forensic identification of Sri Lankan individuals. DYS385, representing two loci, was the most diverse marker (0.853). The lowest diversity (0.351) was observed with DYS391.

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Population: Blood samples were obtained from 207 unrelated male individuals representing four distinct ethnic groups of Sri Lanka, the population details of which mentioned elsewhere [1]. All persons gave their informed written consent prior to their inclusion in the study. Sampling was performed so as to represent populations living in every geographic region of Sri Lanka ensuring at least 35 samples from each minor ethnic group.

Extraction: DNA was extracted as described by Walsh et al. [2].

PCR: 1 ng of target DNA was amplified by PCR using PowerPlex[®] Y System kit (Promega) for 12 Y-STR loci, DYS19, DYS389I, DYS389II, DYS390, DYS391, DYS392, DYS393, DYS385a/b, DYS438, DYS439 and DYS437.

Typing: Typing was performed in an ABI PRISM 3130xl Genetic Analyzer (Applied Biosystems) using ILS600 as the internal size standard and allelic ladders of PowerPlex[®] Y System (Promega). Allele designations were made using GeneMapper[®] ID V3.2

software (Promega) based on the number of repeat motifs and recorded according to the guidelines of the International Society of Forensic Genetics [3].

Results: Haplotype frequencies and overall haplotype diversity of Sri Lankans at 12 Y-STRs are shown in Table 1. Gene diversity (h) values are in Table 2.

Quality control: The corresponding author has participated and passed the Y-STR haplotype reference database (YHRD) quality assurance exercise in 2009, and all the haplotypes of the present study have been submitted to YHRD (YHRD accession number for the data set-YA003519).

Analysis of data: Haplotype frequencies and gene diversities were calculated using Arlequin [4]. The discriminatory capacity was calculated by dividing the number of individual specific (unique) haplotypes by the total number of individuals typed.

Access to the data: Haplotypes described here in can be accessed through the Y-STR Haplotype Reference Database (YHRD). Whole haplotype dataset is available in supplementary data. Additional data is available from the corresponding author on request.

Other remarks: Here we describe our initial Y-chromosomal haplotype data based on the assumption that Sri Lankans constitute a single population.

A total of 195 different haplotypes were identified among 207 male individuals, from which 183 (88.4%) were individual specific. The overall haplotype diversity value of the loci concerned was

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