B33 The Abu Dhabi Population Database for 16 STR Loci

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The goals of this presentation are to establish a basic database in regards the 16 STR loci for native population and other population groups living in Abu Dhabi and to determine the best probability of discrimination between individuals using the 16 loci fluorescent STR multiplex system for the examined population groups.

This population study was conducted on blood samples that were collected from unrelated healthy adults living in Abu Dhabi, United Arab Emirates (U.A.E.) including the native population in Abu Dhabi and other population groups commonly encountered in U.A.E. DNA was extracted by both the organic phenol-chloroform, and FTA™ paper extraction protocols, after quantitation of the extracted DNA (organic extraction only) amplification was carried out for 16 loci (15 + amelogenin). The amplified product was tested with the ABI 310 genetic analyzer and the obtained profiles were interpreted and analyzed. Allele frequencies were calculated for each STR locus for the population groups. The number of heterozygotes, both observed and expected, was determined. The Hardy Weinberg Equilibrium was verified using the Chisquare goodness of fit test and the exact test (P). Power of discrimination (PD) and mean paternity exclusion probability (MEP) were calculated for each locus and for the combined 16 loci. The obtained results were compared with relevant Arab and other ethnic groups databases.

Abu Dhabi, STR, Database