

## MtDNA control region sequence polymorphisms and phylogenetic analysis of Malay population living in or around Kuala Lumpur in Malaysia

Type: Article

Abstract:

Control region polymorphisms in the mitochondrial DNA of 124 unrelated individuals from the Malay population living in or around Kuala Lumpur in Malaysia were investigated and phylogenetic haplogroup lineages were determined. The intergenic COII/tRNA<sup>Lys</sup> 9-bp deletion, 3010 and 5178 mutations, and several coding region polymorphisms were examined to discriminate some phylogenetic haplogroups. Sequence comparison of the control regions led to the identification of 117 mitochondrial haplotypes, in which 103 types were observed in only one individual and the other nine types were shared by more than two individuals. Gene diversity was estimated to be 0.997. Phylogenetic haplogroup determination revealed that the gene pool of the modern Malay population in Malaysia consisted mainly of southeast Asian, east Asian, unidentified and unique, and aboriginal southeast-specific haplogroups. These results suggest a multi-original nature for the modern Malay population. The present database may help not only in personal identification but also in determining geographic origin in forensic casework in Malaysian, Southeast Asian and East Asian populations.

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