

TRACING THE ORIGIN OF THE MALAY RACE THROUGH THE MORPHOLOGICAL, HISTORICAL, SOCIO-CULTURAL AND GENETIC ANALYSIS

RESEARCH CENTER:

Human Genome Center, School of Health Sciences and Dental School, USM

CURRENT STATUS OF PROJECT: Ongoing

RESEARCHERS:

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INTRODUCTION:

The Malay race inhabits particularly Peninsular Malaysia and portions of adjacent islands of Southeast Asia (SEA), east coast of Sumatra, coast of Borneo and smaller islands between these areas. They were traced by anthropological evidence from the north-western part of Yunnan, in China. The proto-Malays were seafaring people, probably from coastal Borneo who expanded into Sumatra and Peninsular Malaysia as a result of trading and seafaring activities. The present day Malays, called Modern Malays of Peninsular Malaysia and coast of the Malay Archipelago are a mixture of different races. They were described as deutero-Malays, descendants of the proto-Malays mixed with modern Indians, Thai, Arab and Chinese. The history and the origin of the Malay race have been the subject of much speculation among scholars. Since the Malays primarily reside within SEA, particularly Peninsular Malaysia, the prehistoric migrations into these regions must be taken into consideration. Several hypotheses of the SEA migration pattern have been put forward. Preliminary studies using mitochondrial DNA analyses suggested affinity of the Southern Mongoloid in the Modern Malay population of Peninsular Malaysia (Zafarina, 2004). The term Melayu or Malay, was also associated with the Hindu-Buddhist Srivijaya Empire (7th-13 centuries CE) believed to be located in the South-eastern part of Sumatra. An Arab text dating around 1000 CE observed that travellers bound for China sailed through the sea of Melayu, that can be inferred to mean the Straits of Melaka. On opposite shores of the Straits of Melaka by the 7th century CE or earlier, there were the domicile areas of the Malays, namely Sumatra and the Malay Peninsular.

OBJECTIVES:

1. To compile the genetic profile of the Malay race.
2. To study the history, social and anthropology of the Malay race.
3. To characterise the craniofacial, dental and ocular features of Malay race.
4. To correlate the genetic profile of the Malay race with their craniofacial, dental and ocular characteristics.
5. To correlate the genetic profile of the Malay race with its history, social and

anthropology.

6. To trace the origin of the Malay race by using the genetic profile, anthropology, craniofacial, dental and ocular characteristics.

METHODOLOGY:

The research encompasses four parts of studies: The Historical and Socio-cultural Analysis, the Ocular Morphology Analysis, the Craniofacial Morphology Analysis, and the last major part, the Genetic Analysis. Various types of genetic markers are used in the study of the genetic components of the population. These markers are autosomal and Y chromosome STR markers, mtDNA, Human Leucocytes Antigen (HLA) and lastly, the SNP genotyping which will be done using the Microarray 50K genechip system.

EXPECTED OUTCOME:

1. The tracing of the origin and the migration pattern of the Malay race.
2. Establishing USM as a part of the member of Pacific Pan-Asian SNP Initiative (PASNPI) organized by Human Genome Organization (HUGO)