

ANALYSIS OF MYELIN BASIC PROTEIN (MBP) LOCUS IN CHINA HANS AND ITS APPLICATION TO FORENSIC SCIENCE

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MBP locus is a tetranucleotide repeat sequence which is 5' to human MBP gene [18q23-pter] with a [TGGA]_n repeat. In this report, allele and genotype frequencies were studied in 203 unrelated Chin Hans by PCR and followed by electrophoresis on denaturing polyacrilamide and silver staining technique. Two discrete polymorphic regions named A and B were detected using one pair of primers, and 9 and 6 alleles were ascertained in the two regions respectively. Allele frequency data was reported in China Hans ranging from 0.49% to 39.41%. Fragment length of the high molecular weight region (A) was between 209 and 241 bps and that of the low one (B) was between 120 and 144 bps measured by fluorescent dye labeling method. The discrimination power (DP) was 97.54% for region (A) and 93.45% for region B. Total discrimination power (TDP) of the two regions reached to 99.84%. Genealogy Study rectified its coincidence to Mendel rule. After some alleles were sequenced, the whole sequence of PCR products were reported which was same as that reported on the Internet (Boylan, K.B.). Applying this method to forensic identification, we confirmed that it has the characteristic of high sensitivity and excellent applicability to old and degraded samples.