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HLA Antigen Distribution in Maratha Community from Mumbai, Maharastra, India

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KEY WORDS HLA; caste; Maratha; West India.

ABSTRACT Two hundred and eighty nine unrelated Marathas residing in Mumbai, Maharastra, (Western India) were studied for HLA A, B, C and DR locus antigen profiles. The HLA antigen maximum likelihood gene frequencies of HLA A1, A2, A9 (24), A11, A19 (33), B5, B7, B35, B40 (61), Cw3, Cw6, DR2, DR5, DR7, DQ1 and DQ2 were increased while that of HLA A3, A10 (26), A36, B8, B13, B16 (38), B18, B21, B22 (55), B53, B73, Cw5, Cw7, DR3, DR4, DR9, and DQ3 were decreased in the Marathas. HLA antigens A25 (10), B14, B39 (16), B54 (22), B56 (22), B58 (17) and Cw8 were not identified in the present investigation. Two Locus haplotype analyses revealed the presence of A10-B8, A1-B17, A24-B52, B5-Cw9, B13-Cw3, B15-Cw2, B35-Cw4, DR2-DQ1, DR5-DQ3 and DR1-DQ9 haplotypes with positive linkage disequilibrium among the marathas. Haplotype A2-B12 was the only haplotype identified in negative linkage disequilibrium. The observed maximum likelihood gene frequencies, haplotype frequencies and linkage disequilibrium in Marathas suggest the influence of genetic drift caused by selection, geography and culture. Further the study reveals that the Hindu population of India cannot be considered as a single panmictic population due to vast allelic diversity and immense heterozygosity in haplotypes.