

Plummer Fa.HLA-A and HLA-B In Kenya, Africa: Allele Frequencies And Identification Of HLA- B*1567 And HLA- B*4426. Tissue Antigens.

Abstract:

HLA-A and HLA-B alleles of a population from Kenya, Africa were examined by sequencing exon 2 and exon 3 DNA and typing using a Taxonomy-based Sequence-analysis (TBSA) method. Extensive diversities were observed at both HLA-A and HLA-B loci in this population. Forty-one HLA-A alleles were identified from 159 unrelated individuals. The most frequently observed alleles were A*6802 (11.64%), A*02011/09 (9.75%), A*7401/02 (9.43%), A*3001 (7.86%), A*3002 (7.23%) and A*3601 (6.6%). Forty-nine HLA-B alleles were identified in 161 unrelated individuals, including two novel alleles, B*1567 and B*4426. The most frequently observed HLA-B alleles were B*5301 (9.01%), B*5801 (8.38%), B*4201 (7.76%), B*1503 (7.14%), B*1801 (6.21%), and B*5802 (5.90%). The most frequently observed HLA-A-B haplotypes were A*3601-B*5301 (3.55%) and A*3001-B*4201 (3.19%), followed by A*7401/02-B*5801 (2.84%), A*7401/02-B*5802 (2.84%) and A*02011/09-B*1503 (2.13%). Linkage disequilibrium and chi2 analysis showed the association of these HLA-A-B haplotypes at the antigen level to be significant. The frequencies of HLA-A and HLA-B alleles from the Kenyan population were compared with that of a population from Cameroon. The difference in allele and haplotype frequency distributions partly reflected the different ethnic composition of these two African populations.