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Apolipoprotein A-IV Polymorphism in Five Punjabi Populations: Gene Frequencies and Gene Diversities

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ABSTRACT Apolipoprotein A-IV genotypes were determined in five population groups (Brahmins, Baniyas, Jatsikhs, Khatri and 'Others') of Punjab (n=780) by two dimensional gel electrophoresis. The apo A-IV exhibits two common polymorphic alleles AIV-1 and AIV-2 with pooled frequencies 0.903 and 0.097 respectively. Distribution of apo A-IV isoforms highlight considerable variation among different ethnic groups across the world. Average heterozygosity of Punjabi population was 0.1753 ± 0.011 at apo AIV structural locus. 'Others' showed the higher heterozygosity (19.55%) than other groups, reflecting greater proportion of incongruence at this locus. The gene diversity among five population groups was 0.3 percent ($H_s = 0.1753$, $H_t = 0.1765$). Estimated allele frequencies of these groups have been compared with the data found in other population groups. The frequency of apo A-IV2 in 'Others' was observed to be the highest except Finns and Icelanders.