

A Genetic Study of Four Population Groups of Uttara Kannada District of Karnataka**Mansi Gauniyal¹, Ipsa Pattanayak¹, S.M.S. Chahal² and Gautam K. Kshatriya¹**¹*Department of Anthropology, University of Delhi, Delhi, India*²*Department of Human Biology, Punjabi University, Patiala, India***KEYWORDS** Halakkis. Siddis. Gonds. Brahmin. Karnataka. Allele Frequency. Genetic Heterogeneity.

ABSTRACT Four population groups, namely, Halakkis, Siddis, Gonds and Havyak Brahmins of Uttara Kannada district of Karnataka state of South India, have been studied for six serological, and red cell enzyme markers to find out genetic affinities of these population groups. In the ADA system, only Siddis showed the fast variant allele ADA*V with a frequency of 1.4 percent. To the best of the authors' knowledge, this variant has not been reported from the populations of southern India. In another red cell enzyme system PGM2, we found Atkinson variant among Siddis with a frequency of 4.8 percent. It is African specific variant and thus, its presence in Siddis lends support to their African ancestry. The level of average heterozygosities was found to be high for all groups. The genetic distance analysis does not reveal any significant differentiation. The average gene diversity (H_T) is 33.13 % and the coefficient of gene differentiation 0.032, indicating that a small contribution to the total variability comes from the inter population variation. Intensive studies with high resolution DNA markers among these populations are likely to provide meaningful insight into the population structure and migration history, and are more suitable to understand the role of evolutionary forces in genetic divergence.