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Geographic Contiguity, Patterns of Gene Flow and Genetic Affinity among the Tribes of Arunachal Pradesh, India

S. Krithika, S. Maji and T.S. Vasulu*

Biological Anthropology Unit, Indian Statistical Institute, Kolkata 700108, West Bengal, India

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ABSTRACT The study examines the regional genetic diversity among 23 Arunachal Pradesh tribes based on 2 loci (ABO and PTC). The results show wide variation in allele frequencies. The 'r' allele shows higher frequency (than 'p' and 'q') and show geographical variation. The results of NJ tree and PCA plot show separation of tribal groups that fairly corresponds to their geographical locations and ethno-historical backgrounds. The Harpending and Jenkins regression plot suggests that these tribes are getting differentiated primarily due to genetic drift and genetic isolation, where gene flow plays a significant role in a few tribes. Also, the affinity among the regional groups based on their ethno-historical origin and migration and genetic diversity was considered by a model-based approach especially by Rao's hierarchical analysis. The results of the study thus support ethno-historical accounts of their antiquity and possible common origin.