

© *Kamla-Raj* 2003

PRINT: ISSN 0972-3757 ONLINE: 2456-6360

Int J Hum Genet, 3(3): 139-145 (2003)

DOI: 10.31901/24566330.2003/03.03.02

ApoB 3'HVR Polymorphism a Genetic Variation in Indian Subcontinent

Faisal Khan¹, Sudha Talwar¹, P. Venkataraman², Suhasini Bhatnagar¹ and
Suraksha Agrawal¹

*1. Department of Medical Genetics, Sanjay Gandhi Postgraduate Institute of Medical
Sciences, Raebareli Road, Lucknow 226 014, Uttar Pradesh, India*

*2. Department of Anthropology, S. V. University, Tirupati 517 502,
Andhra Pradesh, India*

KEY WORDS Apolipoprotein-B; hyper variable region; minisatellites; polymorphism; variation

ABSTRACT Apo B 3' hyper variable region (Apo B 3' HVR) is a highly polymorphic and hence an informative marker. It could be an ideal candidate to study the genetic heterogeneity among different population groups of Indian subcontinent. It is one of the marker for which numerous population data is available. This makes Apo B 3'HVR an ideal locus for a pilot study to investigate the relationships between different populations and the micro-evolutionary processes leading to their present day distribution. In the present study, we have studied ApoB3'HVR among North Indians and South Indians and have compared these populations on the basis of within group and between group diversity. For this purpose we have selected 600 North Indians and 200 South Indians at random. Total 21 segregating alleles were detected in our population groups. The average observed heterozygosity was quite high (avg.0.753) suggesting high diversity at ApoB3'HVR locus. Low value of average G_{st} (0.0005) and F_{st} (0.035) reflects non-significant deviation of heterozygosity between the two groups. On comparing our study populations with central Indian non tribal and tribal groups, it was found that there is relative homogeneity among the three non tribal groups and on computing genetic distances between the four groups, it was observed that tribal significantly differ from the three non-tribal groups. On comparing with other world populations grouped in continental groups, it was clear that greater diversity was observed for Africans followed by the Europeans and Asians. There was relative homogeneity among the continental groups. North Indians and South Indians were found closure to the Asians while non tribal Central Indians clustered with the Europeans. We are further testing these observations, by incorporating more realistic demographic models and by using mt-DNA for maternal lineages and Y-chromosome markers for paternal lineages.

[Home](#)
[Back](#)
