



Category: Molecular Genetics

Y chromosome haplogroup distribution in different ethnic groups of Jammu and Kashmir, India

Indu Sharma¹, Varun Sharma¹, Parvinder Kumar², Ekta Rai¹, Miguel Vilar³
and Swarkar Sharma¹

¹Human Genetics Research Group, Shri Mata Vaishno Devi University, Katra, Jammu and Kashmir 182320, INDIA

²Institute of Human Genetics, University of Jammu, Jammu and Kashmir 180006, INDIA

³Human Genographic Project, National Geographic Society, USA

Presenting author: induadmo@gmail.com

Abstract

India is a country with 4,635 different population groups [1]. Jammu and Kashmir is located on the crossroads of Eurasia, bound by China and Tibet from North-East, Afghanistan and Pakistan from North-West. Diversity in Indian population is anticipated as a result of multiple waves of migration and gene flow that occurred in the past [2]. Y chromosomal variations have been documented as markers to represent deep rooted lineage haplogroups and many of these exist among Indian populations, indicating the early habitation of humans in the Indian subcontinent [3]. To find out the distribution of Y chromosome haplogroup in J&K, we genotyped 133 markers of non-recombining region of Y chromosome (NRY) in 384 males of J&K. Genotyping was done by Agena Massarray Platform. Our analysis showed distribution allocated the studied samples into thirteen major haplogroups R, H, J, P, L, K, IJK, C, F, Q, E, G and O highlighting the genetic diversity in the region.

References

- [1] Gadgil, M. and Malhotra, K.C. (1983) Adaptive significance of the Indian caste system: an ecological perspective. *Ann Hum Biol* 10: 465-477.
- [2] Sengupta, S., Zhivotovsky, L.A., et al. (2006) Polarity and temporality of high-resolution y-chromosome distributions in India identify both indigenous and exogenous expansions and reveal minor genetic influence of Central Asian pastoralists. *Am J Hum Genet* 78: 202-221. <https://doi.org/10.1086/499411>
- [3] Kumar, V., Reddy, A.N., Babu, J.P., Rao, T.N., Langstieh, B.T., Thagaraj, K., Reddy, A.G., Singh, L. and Reddy, B.M. (2007) Y-chromosome evidence suggests a common paternal heritage of Austro-Asiatic populations. *BMC Evol Biol* 7: 47. <https://doi.org/10.1186/1471-2148-7-47>

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