

A Study of Erythrocyte Enzyme Polymorphisms Among People of Kulu District, Himachal Pradesh, India

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ABSTRACT To help complete the genetic map of north Indian hill state of Himachal Pradesh, data on various polymorphic red cell enzyme systems are presented among people inhabiting its central district of Kulu. Blood samples from three main endogamous caste populations of the area viz., the Brahmin (n=114), Rajput (n=234) and Koli (n=101) were collected randomly from unrelated subjects. Haemolysates were typed for a battery of seven erythrocyte enzyme polymorphisms viz., ADA, AK1, ESD, PGM1, ACP1, GLO1 and GPI using standard electrophoretic techniques. Results showed that there were appreciable differences among the present castes in the distribution of the first three polymorphic enzymes (ADA, AK1, ESD) while no significant heterogeneity was discernible in the next three (PGM1, ACP1, GLO1); some GPI variants have been reported for the first time from the state. The Rajput as well as the Koli groups studied here from Kulu district showed similarities with their respective counterparts inhabiting the neighbouring district of Kinnaur. This suggests possible gene flow between these two contiguous districts of Himachal Pradesh.