

Genetic Diversity at ABO and Rh (D) Loci in the Tribal Groups of Mohmand Agency (Federally Administered Tribal Areas), Pakistan

Atta Ur Rehman¹, Abdur Rashid¹ and Sajid Malik²

¹*Department of Zoology, Faculty of Sciences, Hazara University, Garden Campus, 21300 Mansehra, Pakistan*

²*Human Genetics Program, Department of Animal Sciences, Faculty of Biological Sciences, Quaid-i-Azam University, 45320 Islamabad, Pakistan*

KEYWORDS Genetic Variation. Blood Group Systems. Allele Frequencies. Mohmand Agency. FATA. Pakistan

ABSTRACT This study was aimed at determining the frequencies of ABO and Rh blood groups in the population of Mohmand Agency, which is a severely war-affected territory in the North-West Pakistan. A total of 1,019 unrelated subjects (963 males, 56 females) consented to participate in this study. Frequencies of blood types 'A', 'B', 'AB' and 'O' were observed to be 31.9 percent, 27.9 percent, 11.0 percent and 29.2 percent, respectively, while 87.6 percent subjects were found to be Rh-positive. At the ABO locus, allele *O* showed the highest frequency (0.538), while alleles *A* and *B* were 0.244 and 0.218, respectively. At the Rh (D) locus, alleles *D* and *d* showed frequencies of 0.648 and 0.352, respectively. The researchers also established the distribution of blood types across the tehsils and Pashtun tribes of Mohmand Agency. Further, the Nei's genetic distances were measured between the sample obtained from Mohmand Agency and the populations of adjoining districts.