

## ABO and Rh (D) Blood Groups among the Pattapu - A Marine Fishing Community of Andhra Pradesh

A. Papa Rao, C. Venkateswarlu and P. Venkatramana

*Department of Anthropology, Sri Venkateswara University, Tirupati 517 502, Andhra Pradesh, India*

**KEY WORDS** Blood Groups. Pattapu Population. Andhra Pradesh

**ABSTRACT** The incidence of blood groups ABO and Rhesus has been reported in 132 unrelated individuals of Pattapu, a marine fishing community of Nellore District of coastal Andhra Pradesh. The blood group O was observed with highest frequency (46%) followed by B (30%), A (22%) and the AB (2%). The distribution of allele frequencies of the blood groups among the Pattapu population showed similarities with other caste populations of Andhra Pradesh.

During the last four decades, numerous studies have been carried out on the genetic composition of various endogamous populations groups in India (Bhasin et al., 1992, 1994). However, genetic studies among fishing communities in India are very limited. Hence in the present study the distribution of ABO and Rhesus blood groups has been reported among the Pattapu, a marine fishing community of Nellore District of Andhra Pradesh

### MATERIAL AND METHODS

The blood samples from 132 unrelated Pattapu individuals were collected from Nellore District of coastal Andhra Pradesh. The samples were analysed for ABO and Rhesus blood groups using standard procedures. The gene frequencies were calculated after Vogel and Motulsky (1982).

### RESULTS AND DISCUSSION

The distribution of ABO and Rhesus blood group phenotypes of Pattapu was presented table 1. The blood group O occurs with highest frequency (46%) followed by B (30%), A (22%) and AB (2%). The A, B and O allele frequencies were observed in  $O > B > A$  pattern. The value of  $D/\sigma$  was 1.22 indicating that the population is under genetic equilibrium. In case of Rhesus

blood group 86% were positive and 14% were negative (Table 2). The allele frequencies being 0.3793 for *d* and 0.6207 for *D*. The allele frequencies of ABO and Rhesus blood groups show similarities with other caste population groups of Andhra Pradesh.

**Table 1: ABO blood groups among Pattapu population**

Phenotypes	No. Observed (Expected)	Allele frequency
A	29 (26.19)	A 0.1307
B	39 (36.25)	B 0.1757
AB	3 (6.06)	O 0.6936
O	61 (63.50)	
Total	132	1.0000

$D/\sigma = 1.22$   $\chi^2 = 2.153$ ,  $df=1$ ; not significant

**Table 2: Rhesus blood groups among the Pattapu population**

Phenotype	No. observed	Allele frequency
D+	113	D 0.6207
D-	19	d 0.3793
Total	132	1.0000

### ACKNOWLEDGMENT

A. Papa Rao thanks the University Grants Commission for providing travel grants to undertake field work under Special Assistance Programme.

### REFERENCES

- Bhasin, M.K., Walter, H. and Danker-Hopfe, H.: *The Distribution of Genetical, Morphological and Behavioural Traits Among the Peoples of Indian Region*. Kamla-Raj Enterprises, Delhi (1992).
- Bhasin, M.K., Walter, H. and Danker-Hopfe, H.: *People of India: An Investigation of Biological Variability in Ecological, Ethno-economic and Linguistic Groups*. Kamla-Raj Enterprises, Delhi (1994).
- Vogel, F and Motulsky, A.G.: *Human Genetics - Problems and Approaches*. Springer-Verlag, Berlin (1982).