

Genetic Regulation and Effect of Age-Sex Variation on Immunoglobulin Levels – An Investigation Based on a Population Study

M.S. Das¹ and S. Kumar²

¹Anthropology and Human Genetics Unit, Indian Statistical Institute, 203 B.T. Road, Calcutta 700 035, India

²Department of Genetics, Boys Town National Research Hospital, 555 North 30th Street, Omaha, Nebraska 68131, USA

KEYWORDS Immunoglobulin Levels. Genetic Regulation. Age-Sex Variation. Rural Population

ABSTRACT A study of G, A and M immunoglobulin levels in 93 individuals, belonging to Badia population of Malda district, West Bengal, reveals trends of sex and age variation in IgG, and a lower average of IgM level in males than in females. The correlation of coefficients between classes of immunoglobulin appear to absent in females and positively significant among males. The distributional patterns and average IgM levels apparently appears that the genes regulate IgM level are someway related to sex determining factors. Intercorrelations between pairs of immunoglobulin reveal greater environmental influence among females compared to that in males. The average IgG and IgM level in this population appears to be low compared to number of other Indian tribes and caste populations. The sibpair correlations in this population are found to be negative possibly due to environmental influence inflate the correlations.