PRINT: ISSN 0972-3757 ONLINE: ISSN 2456-6330
International Journal of
HUMAN GENETICS

Full text open access online (Since 2001)

PRINT: ISSN 0972-3757 ONLINE: ISSN 2456-6330
Int J Hum Genet, 23(2-3): 154-161 (2023)
DOI: 10.31901/24566322.2023/23.2-3.860

Occurrence of Chromosomal Aberrations in the Traffic Police Population in Tiruchirappalli

T. Ravimanickam[1,*], R. Sakthivel[2], I. Nandhini[1], J. Rawoofkhan[1] and M. Saiyad Musthafa[3]

[1]Department of Zoology, School of Science, Tamil Nadu Open University, Saidapet, Chennai, Tamil Nadu, India
[2]Department of Statistics, Presidency College, Chennai, Tamil Nadu, India
[3]Unit of Research in Radiation Biology & Environmental Radioactivity (URRBER), P.G. and Research Department of Zoology, The New College (Autonomous), Affiliated to University of Madras, Chennai, Tamil Nadu, India

KEYWORDS Chromosomal Aberration. Dicentric. Lymphocytes. Tiruchirappalli. Traffic Policemen

ABSTRACT Chromosomal rearrangements take place over a period of time because of the exposure of various biological and non-biological factors/stress from the environment. This study focused on translocation of DNA, deletion of DNA, loss or gain of chromosomes in mononuclear lymphocytes using selected biomarkers to assess exposure of affected chromosomes due to the pollution factors. The study focused on major changes in the chromosomes such as Dicentric, Acentric, Centric rings, Acentric rings, Chromatid breaks and Chromatid gaps. As a result, this study shows increased CA in the sample TP of the district Tiruchirappalli as compared to controls of the same district and majority of the TP showed drastic increase in acrocentric associated CA.