

Evaluation of Genotoxicity in Pesticide Distributors of Punjab

Pooja Chadha* and Prabha

Department of Zoology, Guru Nanak Dev University, Amritsar, Punjab, India

KEYWORDS Pesticides. Micronucleated Cells. Binucleated Cells. Genotoxicity

ABSTRACT Since before 2000 BC humans have utilized pesticides to protect their crops. From that time the pesticides have become an important tool as a plant protection agent for boosting food production. Punjab is a major zone of consumption of pesticides in India and therefore this state has a large group of population which is exposed directly or indirectly to pesticides. Amongst these the workers involved in the pesticide distribution are least considered. So the present study has been undertaken for investigating 50 pesticide distributors from different cities of Punjab and similar number of control individuals using micronuclei assay in buccal epithelial cells. Significant increase in the frequency of micro nucleated and binucleated cells was found in pesticide distributors as compared to controls. Increasing trend in genetic damage was observed between the workers with increasing years of exposure as revealed by ANOVA. The effect of age, diet and alcohol drinking habits was also studied.