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Analysis of Chromosomal Aberrations in the Peripheral Blood Lymphocytes of Aluminium Foundry Workers

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KEY WORDS Aluminium; occupational exposure; chromosomal aberrations.

ABSTRACT Cytogenetic effects were evaluated by analysing various types of chromosomal aberrations in the peripheral blood lymphocytes of 97 male employees involved in the manufacture of aluminium wire rods and aluminium conductors. The age range of the subjects was 20-52 years and their service in the factory ranged from 1 to 24 years. The workers were occupationally exposed to aluminium fumes and burnt gases. For comparison, 54 healthy controls belonging to the same age group and socioeconomic status were also studied. Peripheral blood lymphocyte cultures were carried out for all the samples and various structural and numerical type of chromosomal aberrations were analysed. A statistically significant increase in total chromosomal aberrations was observed in the exposed group when compared to the control group.

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