

Genotoxic Effects of Psychotropic Drug Nortriptyline In Lymphocyte Culture *In Vitro*: A Preliminary Report

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ABSTRACT This is the first report on the genotoxicity of Nortriptyline on human chromosomes. Nortriptyline, a tricyclic antidepressant, was evaluated for its cytogenetic effects in human peripheral blood lymphocyte cultures *in vitro*. Concentrations of the drug tested were 30, 300 and 600 ng/ml (the first two concentrations therapy). The duration of treatment in cultures for each concentration was 72, 48 and 24 hours. Untreated cultures served as controls for the baseline frequency of parameters assayed. Nortriptyline significantly increased the frequency of chromosome alterations at the upper plasma level and the concentration above that. The cell growth kinetics was significantly affected at all the concentrations evaluated indicating a fast cell cycle rate following exposure to the drug, as compared to the control. The mitotic index, however, was not affected at any of the concentrations. The results indicated a genotoxic potential of Nortriptyline and warrant a cautious use in therapy.