

International Journal of Pharmacy and Technology, 2016, vol.8, N3, pages 15041-15047

Cytogenetic aspects of occupational carcinogenic hazard

Fadeeva S., Mehkov A., Alieva G., Sitdikova I., Gerasimova L., Huzihanov F.

Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

© 2016, International Journal of Pharmacy and Technology. All rights reserved. The effect of chemical factors of the production environment is studied with a wide range of test systems, among which the short-term tests with high sensitivity are in the foreground. We conducted a study to assess the cytogenetic status of servicemen. Micronucleus test was a convenient method of substance screening that can quickly determine the presence or absence of various compounds of cytogenetic nature. We have identified a relationship between exposure of occupational hazards and the level of micronuclei in human peripheral blood. Excess in number of micronuclei occurs at almost three times the rate in the retired servicemen. Indicator in this contingent group was 92.7%. Subject to the age, the risk group of the high chance of malignancy development is the people over age 70. 3N micronuclei level in this age group was found in 96.3%. 3N micronuclei level is found in 71.4% of representatives of the employment group of 3-9 years, while in the employment group of 30-39 years - only in 68.7%. Subject to the military force, the risk group of the high chance of malignancy development are missile, ground, and motorized rifle troops.

Keywords

Carcinogenic hazard, Cytogenetic status, Micronucleus test