

P-18 The Study of Genotoxicity of Molinate (I)
: Supravital Staining Micronucleus Assay with Mouse
Peripheral Blood Reticulocytes

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The genotoxic effect of molinate, a herbicide, was reported differently in bacterial system, and *in vitro* and *in vivo* mammalian system. This study was carried out to clarify the genotoxicity of molinate.

To evaluate the clastogenicity *in vivo*, micronucleus(MN) assay was performed using the acridine orange supravital staining (AOSS) method with mouse peripheral blood reticulocytes.

First of all, to determine the 50% lethal dose(LD50), intraperitoneal acute toxicity test was performed according to Lorke's method. As the result, the i.p. LD50 value of male ICR mice determined as 726 mg/kg body weight. To determine the optimal sampling time, 363 mg/kg, a single half dose of LD50, was injected i.p. to five mice, and the peripheral blood from each mouse was obtained at 12 hr intervals from 12 to 72 hr. Maximum frequency of MNRETs was observed at 48 hr after treatment. Each frequency of MNRETs induced 48 hr after i.p. injection at single dose of 91, 182, or 363 mg/kg was 10.2 ± 4.7 , 14.6 ± 3.9 , or 28.6 ± 6.3 (mean \pm SD of MNRETs / 2000 reticulocytes). From these results, molinate induced MNRETs dose-dependently with significance(<0.005) compared to negative control group in mice.

포스터 발표

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