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The Study of Genotoxicity and Antimutagenicity of Cinnamaldehyde (I) : The Genotoxicity in Bacteria, Mammalian cells and Mice

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Cinnamaldehyde(CAL) which is a main component of cinnamol bark oil is widely used as a flavoring and fragrance agent.

There are many different reports about genotoxicity and antimutagenicity of CAL. In this study, we performed the bacterial reversion assay, chromosomal aberration assay in chinese hamster lung (CHL) cells, and micronucleus assay in mice to clarify the genotoxicity of CAL.

Ames test using *S. typhimurium* TA98, TA100, TA1537, and TA1535, CAL revealed non-mutagenic potential to all strains in the range of 2.3~185 ㎍/㎖ both in the presence and absence of S-9 mixture. On chromosome aberration assay using CHL cells, CAL revealed potent of clastogenicity both in the presence of S9 mixture (18.13~ 72.5 ㎍/㎖) and absence of S9 mixture(7.5 ~ 30 ㎍/㎖). The result from the micronucleus assay on supravital staining micronucleus assay with mouse peripheral blood reticulocytes showed that CAL did not induce micronuclei in the range of 25 ~ 100 mg/kg i. p., while CAL decreased MMC-induced micronuclei in the antimutagenic study.

포스터 발표

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