

【P-10】

Genotoxicity studies of Sophora Japonica Linne Seed Extract(SE)

Soo-Jin Min¹, Mei-Shu Zheng¹, Su-Hyon Kim¹, Jong-Koo Kang² and Kuk-Hwan Kim³,
Sik Hwangbo³, Suk-Hyung Kwon³

¹Special Toxicity team, Biotoxtech Co., Ltd., ²College of Vet. Med., Chungbuk National Univ. and ³Rexgene biotech. Co., Ltd

The objective of this study was to determine genotoxic potential of Sophora Japonica Linne Seed Extract(SE). The bacterial reverse mutation test set the treatment levels of SE at 0, 312.5, 625, 1250, 2500, 5000 $\mu\text{g}/\text{plate}$ using Salmonella typhimurium strains (TA1535, TA1537, TA98, TA100) and Escherichia coli WP2uvrA(pKM101). No significant mutagenic activity was observed both in the presence and absence of S9 mix with all strains such as TA100, TA1535, WP2uvrA(pKM101), TA98 and TA1537. For the in vitro chromosomal aberration test, we set the treatment levels of SE at 0, 156, 313, 625 $\mu\text{g}/\text{mL}$. No structural and numerical chromosome aberration was observed in both the presence and absence of S9 mix. In the micronucleus test, mice were divided into four groups of six male and administered 0, 500, 1000, 2000 $\mu\text{g}/\text{plate}$ SE by gavage and Mitomycin C by intraperitoneal. The mice were sacrificed 24 hours later and bone marrows were collected from the thigh and stained with Giemsa solution. There was no evidence that SE induced micronucleated polychromatic erythrocytes (MNPCEs). The increase of MNPCE in erythrocytes of all treated animals was not statistically significant compare with that of control group. In conclusion, Sophora Japonica Linne Seed Extract(SE) did not show the genotoxic potential under the conditions of this study.

Keyword : Sophora Japonica Linne Seed Extract, reverse mutation test, chromosomal aberration test, micronucleus test, Bacteria, CHL cell