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Evaluation of Safety with Astragali Radix: Ames, Rec and umu assays

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Water extract from Astragali Radix(AR) was tested for the safety using Ames, *Bacillus subtilis* Rec, and *umu* gene expression mutagenicity tests. Mutagenic activity in any assays we tested was not found. In Ames test, *Salmonella typhimurium* TA98 and TA100 were used to identify mutagenic property, and the number of histidine revertants was measured. In the Rec-assay, *Bacillus subtilis* H-17(Rec⁺) and M-45(Rec⁻) strains were used to test DNA damage activity. In the SOS *umu* test, *Salmonella typhimurium* TA1535 containing plasmid pSK1002 was used as a test strain, and we monitored the levels of *umu* operon expression by measuring the β -galactosidase activity. From the results, there was no DNA damage and mutagenicity of AR. Hepatotoxicity of AR to female ICR mice was also monitored by the measurements of s-GOT, s-GPT, LDH activities after oral feeding for 15 days. AR was not shown any significant changes of s-GOT, s-GPT and LDH activities in mice sera. [supported by a grant from the Korea Health 21 R&D Project, Ministry of Health and Welfare, Republic of Korea]