[P-28]

Repeated Subcutaneous Dose Toxicity Study of Dm401 in Mice

Woo H. Choi¹, Yong B. Kim¹, Chang-S. Ha¹, Hyuna Lee², Young D. Kwon³, Ok-M. Choi³, Kyung A. Cheong³, Young-J. Lee³, Woo S. Koh¹

¹Korea Institute of Toxicology, Daejeon, ²Samsung Medical Center, Seoul, ³Medipost Biomedical Research Institute, Seoul, Korea

DM401, dendritic cells pulsed with lysate of melanoma cell clone M3, was subcutaneously administered once a week 8 times to C57BL/6 mice at dose levels of 0, 2.5, 5, and 10 x 10⁷ cells/kg to study general toxicity and immunotoxicity. No changes attributable to the administration were observed in clinical signs, food and water consumption, ophthalmologic examination and urinalysis. The administration induced a slight increase in WBC and a slight decrease in A/G ratio, a slight increase in TP level, an increase in absolute organ weight of spleen. Meanwhile, DM401 had no effect on the NK cell activity and the percentage of lymphocyte sub-populations. Histopathological examinations revealed infiltration of inflammatory cells in lung, mainly in small pulmonary artery in which the tunica media gets thick, and in pulmonary alveoli and alveolar space in some animals. Thickening of tunica media of small pulmonary artery was observed in all dose groups of both males and females. In addition, inflammation and fibrosis was observed in subcutis of the test substance-application site. Taken together, target organ of DM401 is considerd to be lung, and most changes including findings in lung are considered to be resulted from the immune function of the test substance, dendritic cells. The NOEL of DM401 is considered to be lower than 2.5 x 10⁷ cells/kg.

Keyword: Dendritic cells, Toxicity