Nephrotoxicity Study on Fifteen Common Use TCM Prescriptions

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The purpose of this study is to evaluate the effects of fifteen frequently used clinical Chinese preparations (CPs) on kidney function. Fifteen CPs that have not been studied are selected from the top 100 common used CPs for the evaluation. This study using kidney cell lines for potential candidates and the particular candidates will be tested in the animal study.

Screening of CPs using porcine renal proximal tubular epithelia cell line (LLC-PK1) and Mardin-Darby canine kidney cell (MDCK), CRL-2280 and CRL-1927 cell lines were completed. Assessment of 3 different GMP pharmaceutical companies (A, B, and C) for the 15 commonly used clinical CPs were compared. The results indicated that the sensitivity of the four cell lines to the CPs is CRL-2280 > LLC-PK1 > CRL-1927 > MDCK. The Chai-Hu-Kuei-Gi-Tang from B company was caused the four cell line death. The Tau-Hung-Shi-Wu-Tang from A and B companies, Huanh-Lian-Shung-Chin-Wan from B and C companies, Chin-Jau-Be-Jia-Tang from C company were caused three cell lines death. One-third prescriptions were shown to have a cell viability less than 75%. For the CRL-2280 and LLC-PK1, on the other hand, every CPs shown significant cytotoxicity.

Key words: Nephrotoxicity, Chinese preparations, cell lines