Hepatoprotective effects of the major lignans isolated from the wood of *Taxus yunnanensis*

○Nguyen Trung Nhan [1)]、Banskota Arjun H.[1)]、手塚　康弘[1)]、Tran Le Quan [1)]、門田　重利[1)]、信川　高寛[2)]

富山医科薬科大学・和漢薬研究所・化学応用部門[1)]、長春中医学院[2)]

Hepatoprotective activity of four lignans, secoisolariciresinol(**1**), isotaxiresinol (**2**), taxiresinol (**3**) and (7'*R*)-7'-hydroxylariciresinol (**4**), isolated from the wood of *Taxus yunnanensis* were examined on the D-GalN/LPS-induced liver injury model in mice. All these lignans significantly reduced the serum glutamic pyruvic transaminase (sGPT) and serum glutamic oxaloacetic transaminase (sGOT) levels at doses of 50 and 10 mg/kg (*i.p.*) before 12 and 1h of D-GalN/LPS administration as compared to the control group. In histopathological examination, the number of intracellular apoptotic bodies as well as nuclei with chromatin condensation were found to be less in mice liver treated by **1** - **4** as compared to the control group. The electrophoresis of DNA extracted from livers at 8h after D-GalN/LPS-treatment suggested that hepatocytes apoptosis were inhibited by pretreatment of the lignans. Moreover, these lignans significantly reduced the production of TNF-α measured at 90 min after D-GalN/LPS-injection *in vivo* and protected hepatocytes from D-GalN/TNF-α-induced cell death in cultured primary mouse hepatocytes *in vitro*. These results suggested that the major lignans **1** - **4** protected the hepatocytes from apoptosis via an inhibition of TNF-α production by activated macrophages and a direct inhibition of apoptosis induced by TNF-α.