A171 Hepatoprotective pyrrole derivatives from the fruits of Lycium chinense

Young-Won Chin, Eun Ju Lee, Young Choong Kim and Jinwoong Kim
College of Pharmacy, Seoul National University, Seoul, 151-742, Korea.

Fruits of *Lycium chinense* Miller (Solanaceae), distributed in northeast Asia, have been used as a tonic in traditional oriental medicine and were reported to exhibit hypotensive, hypoglycemic, antipyretic activities and prevent stress-induced ulceration in experimental animals. Cerebrosides, which showed an hepatoprotective activity, were previously reported from the fruits of this plant in our laboratory (1). As a part of our continuing search for new and bioactive compounds from the fruits of *L. chinense*, we investigated the EtOAc fraction exhibiting hepatoprotective activity.

We herein report three new compounds, which were identified as 4-[2-formyl-5-(hydroxymethyl)-1*H*-pyrro-1-yl] butanoic acid (**1**), 4-[2-formyl-5-(methoxymethyl)-1*H*-pyrro-1-yl]butanoic acid (**2**), 4-[2-formyl-5-(methoxymethyl)-1*H*-pyrro-1-yl]butanoate (**3**). The hepatoprotective activities of **1-3** were assessed by measuring their effects on the release of glutamic pyruvic transaminase (GPT) from primary cultures of rat hepatocytes injured with CCl_4. Compounds **1** and **3** showed hepatoprotective effects at the concentration of 1 μM (49.9 and 41.7%, respectively).

Acknowledgements: This work was supported by a research grant from the Ministry of Health and Welfare, Korea (HMP-00-CH-14-0013).

References: 1. S.Y. Kim. et al. (1997) J. Nat. Prod. 60: 274-276.

A172 Antihepatotoxic activity of the combination of *Sida cordifolia*, *Costus speciosa* and *Cissamples pareira* against acetaminophen induced rat liver injury

Makani Barman
Department of Zoology, University of Gauhati, Guwahati-781014. India.

The herbal medicines are traditionally being practiced in Assam, India, since time immemorial. Thirty-eight plants species being used against hepatic ailments have been recorded so far. And out of these plant species, the roots of *Sida cordifolia*, rhizomes of *Costus speciosa* and the tender aerial parts of *Cissamples pareira* have been selected. Investigation on the individual plant species suggested that methanolic extract of the rhizomes of CS was proved to be most effective at 80% level against carbon tetrachloride and acetaminophen induced liver injury. Therefore It is aimed to evaluate the efficacy of the combination of these plant species (1:1:1 w/w) against acetaminophen induced liver injury. An effective dose of 400 mg per oral extracted in methanol was sorted out and administered to male Sprague Dawley rats for a period of 48 h at an interval of 12 h. The activity was assessed in terms of serum sorbitol dehydrogenase (SSDH), serum glutamate dehydrogenase (SGLDH), serum glutamate pyruvate dehydrogenase (SGPT) and serum glutamate oxaloacetate transaminase (SGOT). The results were analyzed using ANOVA and found that the elevated marker enzymes depleted by 95% compared to normal control and silymarin received rat group. The overall percent reduction analysis showed the restoration of hepatic function (90-93%) compared to silymarin. Thus this combination of formulation may be suggestive as antihepatotoxic agent.