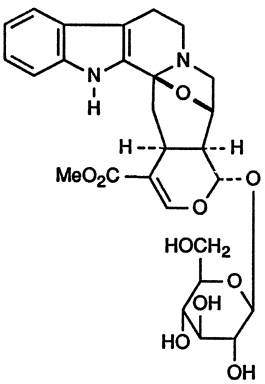
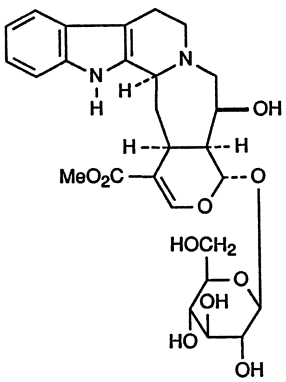
120.3 Pharmacology

The crude total alkaloids from *U. rhynchophylla* and the main alkaloid rhynchophyllin were found to have a hypotensive effect in cats after i.v. doses of 20 mg/kg. Marked hypotensive effects of total alkaloids and rhynchophyllin given at daily doses of 50 mg/kg for 20 or 15 days, respectively, were also observed in rats [16]. Intravenous infusion of total alkaloids of *U. macrophylla* into anesthetized dogs caused moderate hypotension, marked bradycardia, a rise in stroke volume, and a decrease in total peripheral resistance during the initial hypotension. Cardiac output increased briefly and then decreased. Hypotensive activity of total alkaloids from *U. macrophylla* was suggested to arise from decreases in cardiac output and peripheral resistance [17].

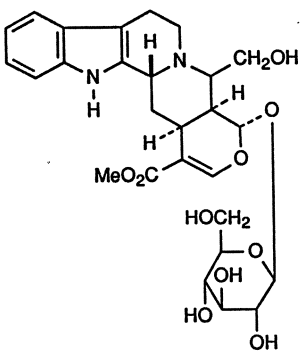
A methanolic extract of the hooks of an *Uncaria* species elicited a strong and long-lasting hypotensive effect in rats and the activity differed from the effects of rhynchophyllin and its analogs. Chemical and pharmacological studies on the extract resulted in the isolation of three indole alkaloid glycosides, cadambine (*120-23*), dihydrocadambine (*120-24*), and isodihydrocadambine (*120-25*). Cadambine and dihydrocadambine are derived from D-homooxayohimban, whereas isodihydrocadambine is derived from oxayohimban. Cadambine was found to be inactive but the other two alkaloids exhibited strong and long-lasting hypotensive action [18].



Cadambine (*120-23*)



Dihydrocadambine (*120-24*)



Isodihydrocadambine (*120-25*)