



CHAPTER V

CONCLUSION AND RECOMMENDATION

The isolated alkaloids from *Uncaria macrophylla* Wall. have been shown to be tetracyclic heteroyohimbine and oxindole alkaloids. Dihydrocorynantheine, isorhynchophylline and rhynchophylline, the alkaloids with *normal* configuration, have been reported to be present in other species of *Uncaria*, i.e., *Uncaria africana* G. Don., *U. attenuata* Korth., *U. avenia* Val., *U. callophylla* Korth., *U. gambir* (Hunt.) Roxb., *U. guianensis* (Aubl.) Gmel., *U. jasminiflora* Hook. f., *U. rhynchophylla* Miq., *U. sclerophylla* Havil. and *U. tomentosa* DC. Isorhynchophylline, rhynchophylline, corynoxine and corynoxine B, the *normal* and *allo* tetracyclic oxindoles, have already been found in this species, *U. macrophylla* Wall., together with other two species, *U. pedicellata* Roxb. and *U. sessilifructus* Roxb. Dihydrocorynantheine has never been reported as being present in *Uncaria macrophylla* Wall. before and this is the first report of its occurrence in this species.

The investigations of alkaloidal pattern, both qualitatively and quantitatively, and site of biogenesis by detecting the leaves, stem bark, root and young shoot collected at monthly intervals over a year period are recommended.

From pharmacological studies, isorhynchophylline showed little neurotransmission and neuromuscular transmission blocking effects while hirsutine, the *pseudo* tetracyclic heteroyohimbine, closely related to dihydrocorynantheine, had strong depressive effects. (Harada *et al.*, 1974; Harada and Ozaki, 1976). Hirsutine inhibited the parasympathetic ganglionic

transmission and showed local anaesthetic action. Hirsutine and isorhynchophylline elevated the tone of the movement of the organ(Harada *et al.*, 1978). Rhynchophylline exhibited antipyretic action, hypotensive property (Saxton,1965a), and paralysed parasympathetic nerve endings (Henry,1949). Another recommendation from this investigation is that more pharmacological studies should be conducted to reveal the overall activities of these types of alkaloids.