

CHAPTER IV



DISCUSSION

The occurrence of the aloe-emodin in *Cassia garrettiana* Craib has not been reported in any literature. The present work has led to the isolation of aloe-emodin from the leaves of this plant. It has been reported that chrysophanol, chrysophanol-dianthrone (-)-11-desoxyaloin were isolated from the heartwood.⁷⁶ In addition to the above mentioned compound, a new anthrone C-glycoside named cassialoin (10-hydroxy-10-C-D-glucosylchrysophanol-9-anthrone) was also isolated from the heartwood of the same plant.⁷⁶

Aloe-emodin is a common anthraquinone compound occurring in *Cassia acutifolia* Delile, *Cassia angustifolia* Vahl^{49,50}, *Cassia javanica* Linn.⁵⁵, *Cassia obtusa* Roxb.⁵⁹ and in many other plants i.e. *Aloe africana* Mill., *Aloe malothii* A. Berg., *Aloe pretoriensis* Pole-Evans, *Asphodelus albus* Willd., *Asphodeline lutea* Reichb., *Bulbine annua* Willd., *Bulbine asphodeloides* Spreng.⁷ (Liliaceae) *Rheum emodi* Wallich, *Rheum officinale* Baillon, *Rheum palmatum* Linn., *Rheum webbianum* Royle⁷⁷, *Rumex acetosa* Linn., *Rumex acetosella* Linn., *Rumex confertus* Willd., *Rumex conglomeratus* Murr., *Rumex nepalensis* Spreng., *Rumex palustris* Sm., *Rumex patientia* Linn., *Rumex obtusifolius* Linn., *Rumex scutatus* Linn.⁷⁵ (Polygonaceae) *Rhamnus frangula* Linn.⁷⁹ (Rhamnaceae) which are used as purgatives or laxatives. To make known the presence of aloe-emodin and to isolate aloe-emodin from the

leaves of *Cassia garrettiana* Craib might yield a worthwhile information for using the leaves of *Cassia garrettiana* Craib as a substitute for Senna (*Cassia acutifolia* Delile and *Cassia angustifolia* Vahl) leaves. Kupchan and Karim⁷⁹ reported that aloe-emodin from *Rhamnus frangula* Linn. is an antileukemia on the experimental mice and the work on this line is in progress. If this mentioned work is successful, we will have a new antileukemic drug originated from Thai plant. Though the content of aloe-emodin in the leaves found in this investigation is low (about 0.01% of dried leaves basis), it is the main constituent with traces of other compounds. Moreover, there is no shedding of the leaves from this tree, hence the supply of the leaf material will be available all year round for extraction and isolation (of aloe-emodin).