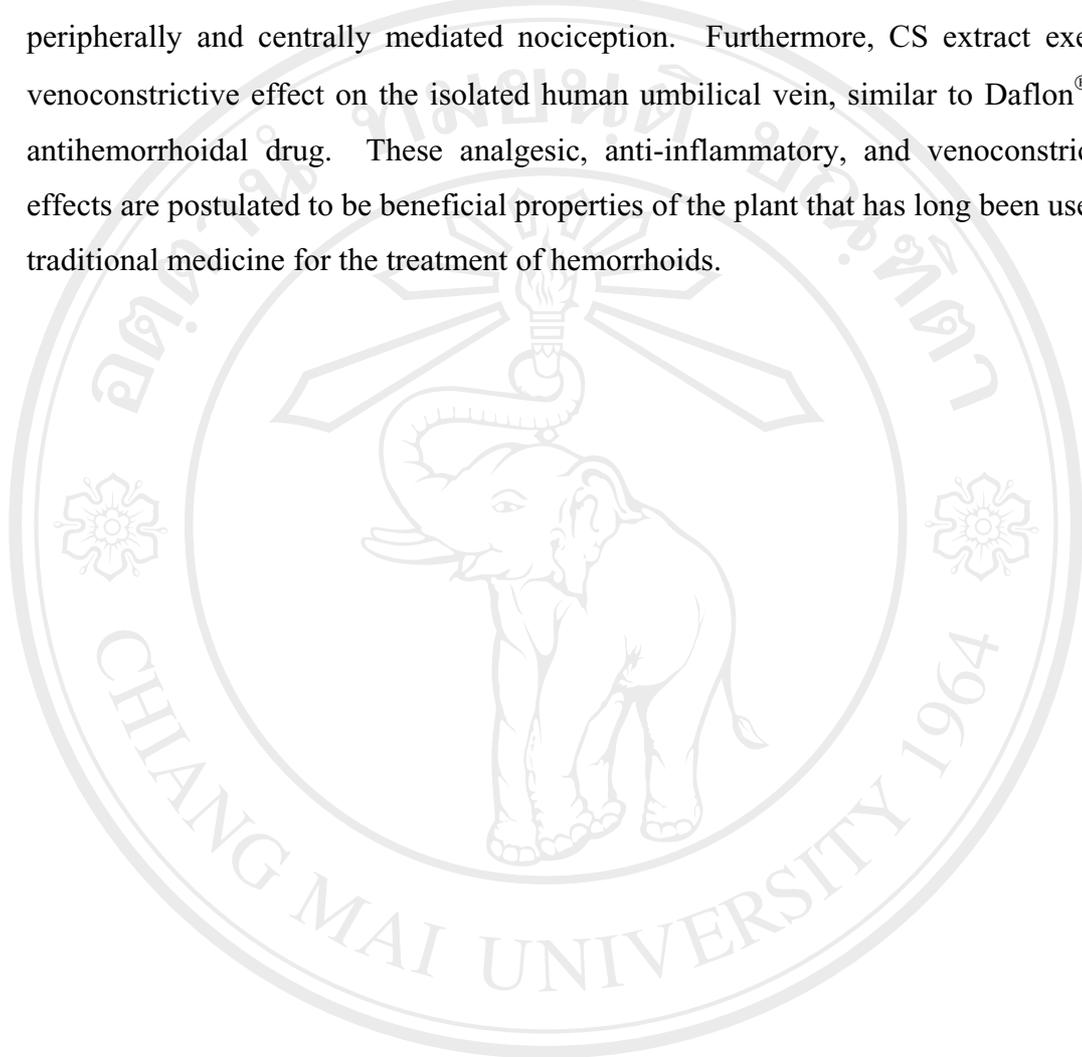


Thesis Title	Analgesic, Anti-inflammatory and Vascular Effects of <i>Clerodendrum serratum</i> Linn. Extract	
Author	Miss Arun Phacharoen	
Degree	Master of Science (Pharmacology)	
Thesis Advisory Committee:	Assoc. Prof. Dr. Ampai Panthong	Chairperson
	Dr. Parirat Khonsung	Member
	Dr. Puongtip Kuananusorn	Member

ABSTRACT

Clerodendrum serratum Linn. is one of most frequently used medical plants in Thailand for many ailments, especially for the treatment of hemorrhoids. Many studies revealed that *C. serratum* shows anti-inflammatory, anti-rheumatic, anti-asthmatic and antipyretic effects. The purposes of the present study were to study analgesic, anti-inflammatory, and vasoconstrictive effects of the methanol extract of the aerial part of *C. serratum* (CS extract) in various animal models in comparison with reference drugs. It was found that CS extract exerted an inhibitory activity on the acute phase of inflammation as seen in ethyl phenylpropionate-induced ear edema as well as in carrageenin- and arachidonic acid-induced hind paw edema in rats. The anti-inflammatory mechanism of CS extract may be due to an inhibition of the synthesis and/or release of inflammatory mediators through cyclooxygenase and lipoxygenase pathways. It is likely that CS extract is a dual inhibitor of arachidonic acid metabolism or an inhibition of phospholipase A₂. In the analgesic test, formalin in normal saline solution was injected subcutaneously into the right dorsal hind paw of the mice. CS extract showed a potent analgesic effect in both the early phase and

the late phase. The mechanism of analgesic activity may be via an inhibition of peripherally and centrally mediated nociception. Furthermore, CS extract exerted vasoconstrictive effect on the isolated human umbilical vein, similar to Daflon[®], an antihemorrhoidal drug. These analgesic, anti-inflammatory, and vasoconstrictive effects are postulated to be beneficial properties of the plant that has long been used in traditional medicine for the treatment of hemorrhoids.



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