



Leaf and Stem Morpho-Anatomy of *Cordia americana* (L.) Gottschling & J.S. Mill., Boraginaceae

Stella M. S. LÓ¹ & Márcia R. DUARTE^{2*}

¹ Programa de Pós-graduação em Ciências Farmacêuticas and

² Laboratório de Farmacognosia, Departamento de Farmácia, Universidade Federal do Paraná,
Av. Prof. Lothário Meissner, 632, 80210-170, Curitiba-PR, Brazil

SUMMARY. *Cordia americana* (L.) Gottschling & J.S. Mill. is a tree which belongs to the Boraginaceae family and is native to the South of Brazil, Paraguay and Argentine, where it is commonly known as guajuvira and guayaibí. In folk medicine, the leaves are used as emollient, antimicrobial and anti-inflammatory, as well as the stem has antidiarrheal and hepatoprotective effects. Preliminary phytochemical studies have shown the presence of tannins, coumarins, quinones and cinnamaldehyde derivatives. This work has investigated the leaf and stem morpho-anatomy of *C. americana*, in order to contribute to the pharmacognostic quality control. Samples of adult leaves and young stems were fixed, either sectioned by freehand or embedded in glycol methacrylate and sectioned by microtome, and then the sections were stained. In parallel, microchemical tests and scanning electron microscopy were also performed. The leaves are alternate, simple, elliptic-obovate and slightly serrate. Anomocytic stomata occur on the abaxial surface. The mesophyll is dorsiventral and the midrib has a plano-convex cross-section and various collateral vascular bundles in closed arc. In the stem, it is encountered phellogen installed superficially and a discontinuous sclerenchymatic sheath encircling the vascular system. The phloem is stratified and cuneiform. Phenolic compounds and calcium oxalate crystals are present in the leaf and stem.

KEY WORDS: Medicinal plant, *Patagonula americana*, Calcium oxalate crystals, Phenolic compounds.

* Author to whom correspondence should be addressed. *E-mail:* marciard@ufpr.br