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Preliminary phytochemical screening and evaluation of anti-inflammatory properties of *Albizia* species

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Sri Lanka is one of the few countries in the world which is rich in exclusive species of medicinal plants and has enormous traditional knowledge in use of using herbal medicine for treatment of various diseases. *Albizia lebbbeck* (L.) Benth (Vern. Suriya mara) and *Albizia odoratissima* (L.F) Benth (Vern. Huri mara) are two species that belong to the family Fabaceae which contain remarkable medicinal value. These species have become rare in distribution due to higher demand for medicine, timber and over exploitation from natural habitat. On the other hand, due to the increasing demand for these species, adulteration has been reported in many instances. Therefore, this study intends to screen phytochemicals and to evaluate the anti-inflammatory properties of these *Albizia* spp. to fulfill its quality control needs and to identify which species contain the highest anti-inflammatory properties. Leaves, barks, seeds and flowers of the above two species were subjected to sequential extractions using hexane, chloroform, ethyl acetate, methanol and water. Phytochemical screening of these extracts revealed the presence of alkaloids, glycosides, flavonoids, steroids, tannins, saponins, and terpenoids in different parts of the two species. Methanol extract showed the highest number of phytochemicals while hexane extract showed the least numbers of phytochemicals. Human red blood cell (HRBC) membrane stabilization method was used to evaluate anti-inflammatory activity. Leaves, barks, seeds and flowers of *A. lebbbeck* and *A. odoratissima* were subjected to sequential extraction with hexane, chloroform, ethyl acetate and methanol. Methanolic extraction of barks and seeds of both species have shown higher anti-inflammatory activity compared to the standard (asprin). The presence of anti-inflammatory activities in the barks and seeds of these two species was a worthy indication for exploring these species as potential sources for developing pharmaceuticals.

Keywords: *Albizia lebbbeck*, *A. odoratissima*, anti-inflammatory, phytochemical screening