



## ***Cecropia pachystachya* TRÉCUL. ATTENUATES LUNG INFLAMMATION AND OXIDATIVE STRESS IN PLEURISY INDUCED BY CARRAGEENAN IN RATS.**

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**Introduction:** Oxidative stress plays a key role in development of acute inflammatory diseases. The *Cecropia pachystachya*, is popularly used in bronchitis and cough treatments. Thus, the investigation of its anti-inflammatory and antioxidant properties remains relevant. **Methods:** The extract was characterized by HPLC. The *in vitro* antioxidant activity was also evaluated. Further, the *in vivo* antioxidant and anti-inflammatory effects of the CAE (10-300 mg/kg, intragastrically) was investigated in the animal model of pleurisy. **Results:** HPLC analysis showed the presence of chlorogenic acid and C-glycosyl flavonoids (isoorientin and isovitexin) as the major compounds of the CAE. The CAE presented *in vitro* antioxidant activity induced by free radical generators AAPH (2,2'-azobis (2-amidino-propane) dihydrochloride); FeSO<sub>4</sub> and H<sub>2</sub>O<sub>2</sub>. In addition, the *in vivo* experiments showed that administration of carrageenan (Cg) increase the inflammatory parameters and oxidative damage. These levels were reversed after CAE (100-300 mg/Kg) treatment in animals with comparable results to Dexamethasone (Dex) treatment. Further, the CAE were effective to reduce the proinflammatory cytokines, cell infiltrate, myeloperoxidase (MPO) activity, nitrite/nitrate concentration, lactate dehydrogenase (LDH) activity, activity, total protein levels and parameters of oxidative damage induced by Cg. **Conclusion:** CAE of *C. pachystachya* exerts significant *in vitro* and *in vivo* anti-inflammatory and antioxidant activities, probably to the presence of C-glycosyl-flavonoids present in these samples.

**Acknowledgement:** UFSC, UNISUL, CNPQ.

All experimental procedure involving animals were performed according with the Brazilian Guidelines for the Care and Use of Animals for scientific and teaching purposes - (DBCA-2013) in accordance with the US guidelines (NIH publication 85-23, revised in 1996), with the approval of the Ethics Committee of the Universidade do Sul de Santa Catarina/UNISUL (number 12.021.4.03 IV).