Caesalpinia ferrea Aqueous Extracts and Lectins: Antioxidant Activity

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Free radicals have different roles in the body and are engaged in the production of energy, phagocytosis, regulation of cell growth and intercellular signaling. However, their excess presents deleterious effects, such as damage to DNA, proteins and lipids causing oxidative stress, which is implicated in various diseases. Caesalpinia (Libidibia) ferrea is a species that comes from Brazil and its different tissues are used in folk medicine presenting various therapeutic properties as antidiabetic, scarring, expectorant, antifungal, antibacterial, anti-inflammatory and anthelmintic activities. Studies with bark aqueous extracts from C. ferrea demonstrated the presence of proanthocyanidins, tannins hydrolysable, cinamics derivatives, and flavonoid trace amounts that make this plant a promising source of antioxidant compounds. The study aimed to purify lectins and to explore the antioxidant activity of C. ferrea extracts and lectins. Aqueous extracts and CfePL, CfeBL and CfeLL, respectively obtained from C. ferrea pod, bark and leaf, were subjected to the antioxidant activity test determined by radical 2,2-diphenyl-1-picrilhidrazil (DPPH). Bark, pods and leaf extracts presented 73.1%; 71.06% and 24.7% inhibition of oxidation of the DPPH substrate, respectively; only CfeBL and CfeLL showed 30% and 9.1% of inhibition, respectively. According to these results, the antioxidant potential presented by the studied samples may be related to the therapeutic properties of C. ferrea.

Word Keys: Antioxidant activity; Caesalpinia ferrea; Lectins.
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