

LECTINS FROM DIFFERENT TISSUES OF *Caesalpinia ferrea*: PURIFICATION AND PARTIAL CHARACTERIZATION

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Caesalpinia ferrea Mart. is a legume broadly distributed at North and Northeast Regions of Brazil. Different *C. ferrea* tissues have been used in popular medicine, which waked the interest to isolate and purify these plant lectins. *C. ferrea* pod lectin (CfePL), previously purified, showed a potent antimicrobial activity. The aim of this work was to obtain *C. ferrea* leaf (CfeLL) and bark (CfeBL) lectins. Extracts were ammonium sulphate fractionated (0-80 %) and chromatographed on chitin column. Hemagglutinating activity (HA) of preparations was evaluated with different erythrocytes, ions, pH values, carbohydrates and glycoproteins, as well as temperatures. CfeLL and CfeBL were evaluated by PAGE for basic protein, as well as under denatured and reduced conditions. CfeLL and CfeBL showed a chromatographed profile similar to that obtained for CfePL purification. The lectins did not show specificity to human erythrocytes and were not stimulated by ion solutions. HA of CfeLL and CfeBL were partially inhibited by glycoproteins; activities were stable at temperature treatments (maintained the activity even after heating to 100 °C for 1 h) and presence of pH values. Both lectins were basic proteins and showed an electrophoretic pattern similar to CfePL. In conclusion, the purified lectins had similar characteristics to CfePL; they will be assayed as potential antimicrobial agents.

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Key words: *Caesalpinia ferrea*, lectins, protein purification.