

## AMPEROMETRIC EVALUATION OF THE INTERACTION BETWEEN *BAUHINIA MONANDRA* LEAF LECTIN IMMOBILIZED ON NAFION BEADS AND LEAF ENDOPHYTIC BACTERIUM

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It is of great interest to unravel the action mechanism of endophytics in plant tissues. Lectin-carbohydrate interactions constitute a signal to recognize such specific bacteria. The objective of this work was to evaluate the specific interaction between *Bauhinia monandra* leaf lectin (BmoLL) and *B. monandra* leaf endophytics (strain UFPEDA 598). The electrochemical cell contained a platinum electrode (work electrode), and a calomel saturated electrode (reference electrode) coupled to a potentiostat. BmoLL was immobilized in Nafion beads (BmoLL-Nafion beads); 150 mM NaCl and 200 mM phosphate buffer were electrolytic media. Evaluations were carried out in presence and absence of different galactose concentrations. BmoLL/endophytic interactions were revealed through amperometric current (112 nA) in 200 mM phosphate buffer without galactose. Results (56 nA) were obtained for BmoLL in 150 M NaCl without endophytics and with 400 mM galactose. The electrochemical system containing BmoLL-Nafion beads revealed specific protein interaction with endophytics. Best amperometric response of binding was obtained with 200 mM phosphate buffer; the system could be a model to detect interaction lectin/bacteria.

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