Antibacterial activity of *Plinia jaboticaba* against bacteria from urinary tract infection

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**Introduction:** Urinary tract infections are the most common bacterial infection. These infections are often asymptomatic, although on occasion they produce discomfort for selective older patients, and present a risk for bacteremia, septic shock, adult respiratory distress syndrome, and death (Gleckman, Clin Geriatr Med, v. 8, p. 793, 1992). The aim of this study was to test the antibacterial activity of *P. jaboticaba*, a Myrtaceae specie native from Brazil, against bacteria that are responsible for urinary tract infection.

**Experimental:** The aerial parts of *P. jaboticaba* were collected in Blumenau (SC, Brazil), and its crude extract and fractions (hexane, dichloromethane, ethyl acetate, butanol, aqueous and insoluble residue) were prepared and used for antimicrobial test. The antibacterial activity was determined by the microbroth dilution assay, against *Escherichia coli*, *Proteus mirabilis*, *Klebsiella pneumoniae*, *Staphylococcus saprophyticus* and *Enterococcus faecalis*. The samples were transferred to each microplate well in serial dilution from the original solution of the extract in DMSO (10%), with initial concentration of 1 mg/mL. Inocula (0.5 in the McFarland scale) and sample were incubed at 35ºC for 18-24 h. In each plate were performed a sterility control (no inocula added), a positive control (gentamicin), and a negative control (DMSO only). After incubation, the plates were revealed with a methanol solution of tetrazolium (5 mg/mL) and incubated at 35 ºC for 2 h. Bacterial growth in the wells was indicated by a red color. The MIC was calculated as the highest dilution showing complete inhibition of tested strain. Extracts with MIC under 1 mg/mL, were considered active.

**Results/discussion:** The samples of *P. jaboticaba* were active against all bacteria tested, with MIC values ranging 0.06mg/mL to 0.5mg/mL. The butanol fraction presented a better activity (0.06 mg/mL) against *Staphylococcus saprophyticus*.

**Conclusion:** *P. jaboticaba* demonstrated antibacterial activity against all bacteria tested and the identification of responsible bioactive compounds are under way.

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