

Title: ANTIMICROBIAL ACTIVITY EVALUATION OF HYDROALCOHOLIC EXTRACTS OF *Myracrodruon urundeuva* e *Prosopis juliflora* AGAINST *Escherichia coli* PRODUCER OF EXTENDED SPECTRUM BETA-LACTAMASE

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Abstract

Because of the big increase of pathogenic micro organism resistance to multiple drugs, due to the indiscriminate use of antimicrobial, there is a concern on the search for new therapeutic alternatives. One of the most important mechanisms of resistance to the betalactamic antibiotics is the production of enzyme like beta-lactamase of the extended spectrum (ESBL) by bacterium. In this context, *Escherichia coli* is one of the most mentioned bacteria, affecting more frequently women and children with urinary tract infections. The bacterial resistance to multiple drugs is considered as a inherent problem to the antimicrobial therapy, showing the need to search for new therapeutic sources from natural resources like plants, that require low production costs, less side effects and that can be more efficient to bacterial infections treatment. This article intends to evaluate the antimicrobial activity of the hydroalcoholic extracts from the *Prosopis juliflora* (Sw.) leaves, known as Algaroba and from the *Myracrodruon urundeuva* Fr. Allm. bark, the Aroeira of sertão, against the strains of *Escherichia coli* producer of beta-lactamase of the extended spectrum (ESBL), isolated from patients with urinary tract infections. Hydroalcoholic extracts of 70% were obtained from *Prosopis juliflora* leaves and from the barks of the stem of *Myracrodruon urundeuva* by percolation method. For the antimicrobial activity determination, the diffusion technique in solid media and plate cavity was used, and the extracts being submitted to serialized successive dilutions of 50%, 25%, 12,5% and 6,25%, from crude extract. It was found antimicrobial activity of crude extract of *Prosopis juliflora* leaves for all strains of *E. coli* tested, and inhibition in concentration of 50%, while the bark extract of *Myracrodruon urundeuva* did not presented antimicrobial activity for the tested strain. Therefore the study with the *Prosopis juliflora* (Sw.) extract must be in depth, aiming at its use as alternative therapy for the bacterial infections treatment mainly of urinary tracts.

Keywords: Bacterial resistance. Leaves. Barks. ESBL