

Antibacterial Activity from *Apodanthera congestiflora* (Cucurbitaceae) Root

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INTRODUCTION: Plants from Cucurbitaceae family contain multiple compounds, which showed anticancer and antioxidant activities, among others. *Apodanthera congestiflora* root is used by people to treat diseases despite the absence of scientific reports on chemical composition and biological activities. **OBJECTIVE:** This study determined the antimicrobial activity of organic extracts from *A. congestiflora* root. **MATERIAL AND METHODS:** Extracts in hexane (EHex), ethyl acetate (EEtOAc) and methanol (EMeOH) were obtained using a Soxhlet apparatus and were investigated for antibacterial activity against eight species. The Broth Microdilution Method was carried out to determine the minimum inhibitory (MIC) and minimum bactericide (MBC) concentrations in mg/mL. **RESULTS AND DISCUSSION:** MIC and MBC values for EHex were, respectively, 1.56 and 7.5 (*Staphylococcus aureus*), 3.12 and 3.75 (*Micrococcus luteus*), 0.94 and 7.5 (*Bacillus subtilis*), 3.75 and 7.5 (*Escherichia coli*), 0.23 and 7.5 (*Pseudomonas aeruginosa*), 0.94 and 1.87 (*Mycobacterium smegmatis*), 1.87 and 7.5 (*Serratia marcescens*) and 0.94 and 7.5 (*Enterococcus faecalis*). EEtOAc was also active on all tested species with the following MIC and MBC values, respectively, for: *S. aureus* (1.87 and 3.75), *M. luteus* (1.87 and 1.87), *B. subtilis* (1.87 and 7.5), *E. coli* (7.5 and 7.5), *P. aeruginosa* (0.94 and 3.75), *M. smegmatis* (0.94 and 7.5), *S. marcescens* (3.75 and 15) and *E. faecalis* (0.94 and 3.75). EMeOH was not active on *B. subtilis* and *S. marcescens* but was antibacterial agent to (MIC and MBC, respectively): *S. aureus* (6.25 and 15), *M. luteus* (6.25 and 15), *E. coli* (7.5 and 15), *P. aeruginosa* (3.75 and 7.5), *M. smegmatis* (3.75 and 15), and *E. faecalis* (1.87 and 7.5). **CONCLUSION:** EHex was the best antibacterial extract and showed the lowest MIC for *P. aeruginosa*. Further studies are in progress in order to identify the compounds and mechanisms involved in the antibacterial activity of *A. congestiflora* root extracts.

Keywords: Antimicrobial, Cucurbitaceae, Organic extracts

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