

ANTIMICROBIAL ACTIVITY OF NEUTRAL AND ACIDIC FRACTIONS OBTAINED FROM *Croton blanchetianum* ON ORAL BACTERIA

Firmino, N.C.S.¹, Alencar, M.F.¹, Vasconcelos, M.A.¹, Arruda, F.V.S.¹, Vale, J.P.C.¹, Ferreira, J.M.M.¹, Alexandre, F.S.O.², Silveira, E.R.², Teixeira, E.H.¹

¹ Laboratório Integrado de Biomoléculas (LIBS), Departamento de Patologia e Medicina Legal, Universidade Federal do Ceará, Fortaleza, CE (Rua: Monsenhor Furtado, S/N, Rodolfo Teófilo 60441-750), ² Departamento de Química Orgânica e Inorgânica, Centro de Ciências, Universidade Federal do Ceará, Fortaleza, CE (Campus do pici, 60541-970)

Microorganisms have been evolving with strategies that allow survival in a hostile environment. In addition, the inappropriate use of antibiotics has been contributing to the emergence of antibiotic-resistant microorganisms. The search for new antimicrobials capable of combating microbial resistance is considered of great importance in the world. Brazil is among the most biodiverse nations. It has been estimated that a new plant species is identified approximately every two days in Brazil. Therefore, it seems reasonable to believe that the chance of finding a new drug is increased as new species are described. This study aimed to evaluate the antibacterial action of neutral and acidic fractions obtained from the hexane extract of *Croton blanchetianum* roots on planktonic forms and biofilms of Gram-positive bacteria *Streptococcus mutans* UA159 and *S. parassanguinis* ATCC 903. For this purpose, the hexane extract of *C. blanchetianum* was properly subfractionated, resulting in 40 neutral and acidic fractions, and thus originating 3 different chemotypes of *C. blanchetianum*. The fractions were then tested regarding their antimicrobial potential in concentrations ranging from 500 – 3.8 µg/mL. The minimal inhibitory concentration (MIC) and minimal bactericidal concentration (MBC) were determined by the broth microdilution method in 96-well polystyrene plates. The results showed that antibacterial activity was different between the chemotypes of *C. blanchetianum*. However, the best antimicrobial actions were achieved in the acidic fractions, with MIC and MBC values ranging from 15.6 to 7.8 µg/mL for both bacterial strains. Therefore, the acidic subfractions obtained from the hexane extract of *C. blanchetianum* may contain important compounds with antibacterial activity. Future approaches must be developed to better identify and characterize the compounds responsible for the antimicrobial activity.

Keywords: *Croton blanchetianum*; antimicrobial; acidic fractions; *Streptococcus*

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