

SCREENING AND BIOCHEMICAL CHARACTERIZATION OF BACTERICIDAL PEPTIDES FROM *LIPPIA* GENUS

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Pulmonary, urinary and digestive infections caused by pathogenic bacteria are serious problems for human health, affecting several developing countries. To solve those problems, novel strategies have been utilized, such as the screening and further isolation of plant peptides with antimicrobial activities against human pathogens. In this report, we challenged pathogenic bacteria with the antimicrobial peptides isolated from *Lippia rotundifolia* and *L. rubella* flowers, as well seeds from *L. salvifolia*, *L. sidoides* and *L. rubella*. These peptides were extracted with a solution of 0.6M NaCl and 0.1% HCl, following ammonium sulphate precipitation (100%). SDS-PAGE analyses showed that rich fraction presented a wide protein range. Moreover, bioassays results indicated that the extract from *L. rotundifolia* was able to inhibit the development of *Klebsiella* sp. (50%), *Streptococcus pyogenes* (50%), *Proteus* sp. (40%) and *Escherichia coli* (15%). Therefore, *L. salvifolia* extract was able to completely inhibit *Klebsiella* sp. growth. Nevertheless, no activities of *L. sidoides* and *L. rubella* extracts were obtained. In conclusion, our data indicated that these peptides could be used, in a near future, as a novel biotechnological tool for development of new antibiotics.

Financial support: CNPq, CAPES, FAPEMIG and UCB.