

NOVEL ANTIMICROBIAL PEPTIDES ISOLATED FROM
CAJANUS CAJAN SEEDS.

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In the past century, antibiotics could be considered an outstanding discovery. Nevertheless, novel pathogenic bacteria have also been described, difficulting treatments. In order to solve this issue, novel antibiotal sources have been screened from plant seeds. Among them, *Cajanus cajan*, an old crop frequently found in Latin America was evaluated in this work. Here we reported the isolation and characterization of novel proteins from *C. cajan* seeds with antimicrobial activities. Proteins were extracted using a solution containing 0.6 M NaCl and 0.1% HCl (1:3 w/v). Crude extract was centrifuged and the supernatant was precipitated with ammonium sulphate (100%). After precipitation, sample was centrifuged at 4,000 rpm for 20 min at 4°C. The precipitate was resuspended, dialyzed against distilled water and applied onto a SP-Sepharose affinity column followed by a reversed-phase HPLC (Vydac C18-TP). SDS-PAGE analyses revealed three major proteins from different molecular masses. *In vivo* bioassays showed that purified proteins were able to reduce 30% of *Staphylococcus aureus* development, a gram-positive bacterium that causes hospital infections. Proteins here reported indicated a possible strategy to control hospital infections.

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