Título: Presence and antimicrobial activity of endophytic bacteria isolated of *Casearia rupestris* hydroalcoholic extract

Autores SOUZA, G. F[1]; PRATES, L. L. C. M[1]; FARIA, R. V. J[1], NOBRE, S. A. M[1]

Instituição [1]Laboratório de Epidemiologia e Biocontrole de Microrganismos, Universidade Estadual de Montes Claros – UNIMONTES. Cx. Postal 126, CEP 39.401-089, Montes Claros – MG.

Resumo:

Several studies have been conducted in the direction of new antimicrobial agents from plant extracts recognition. However, the presence of microorganisms endophytes and the survival of these throughout the extraction process of the plant substances, has been frequently overlooked. This study aimed to investigate the survival of microorganisms after extraction of plant substances with ethanol, and the potential antimicrobial activity of metabolic extract of the survivors. The plant under study was *Casearia rupestris* (Cr). Leafs of adult plants of *C. rupestris* were collected in Brazilian savanna, which were dried at 45 °C and ground in a knife mill, previously sanitized. To certify of sterility state of leafs extract (CrE) was made the microbiological analysis of the extract, which were isolated bacterial colonies with morphotype and gram diverse. They were made and morphological of spores by heat shock synthesis induction studies. The bacterial products (BP) to evaluation of the antimicrobial activity were obtained after *Log* stage on growth curve. The antimicrobial activity of BP was assessed on *Streptococcus mutans* (ATCC 25175), *Staphylococcus aureus* (ATCC 25923), *Escherichia coli* (ATCC 8739), *Enterococcus faecalis* (ATCC 4083), and *Candida albicans* (ATCC 10231), by Kirby Bauer method. Five microorganisms were isolated from CrE, whose taxonomic identification was not conclusive. None of the bacteria isolated from the hydro-alcoholic extract of *Casearia rupestris* leaves, has produced extracellular substances able to restrict the challenged pathogens. However one should not rule out the possibility of them secrete antibiotic substances in the plant leaves. Further testing should be conducted to better understand the phenomenon.

Palavras-chaves: Guaçatonga; pururuca; endospore.

Agência Fomento: FAPEMIG.