

**Título: ANTIMICROBIAL ACTIVITY OF THE ESSENTIAL OIL FROM *Aristolochia trilobata* L. AND ITS MAJOR COMPOUND SULCATYL ACETATE.**

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**Resumo:**

In recent years, the research on natural products has grown aiming their therapeutic potential. Popularly known in Brazil as “angelicó” or “milhomem”, the plant which is the target of this study, *Aristolochia trilobata*, is broadly used on traditional medicine over Central America and Northeastern Brazil as diuretic, antiseptic, on the treatment of infections among many other applications. In order to observe the antimicrobial activity of essential oil (EO) from *A. trilobata* and its major compound sulcatyl acetate (SA), the minimum inhibitory concentration (MIC) was evaluated using the method of serial dilutions against several microorganisms clinically important. Among the fungi (yeasts and molds) bacteria (Gram-positive, Gram-negative and Mycobacterium) and protozoa tested, MIC varied from 62,5µg/ml to 2500µg/ml for EO and 150µg/ml to 4900µg/ml for SA, highlighting the yeasts *Cryptococcus neoformans* and *Candida albicans*, the bacteria Meticilin Resistant *Staphylococcus aureus* (MRSA) and the protozoa *Leishmania amazonensis* and *Leishmania infantum* as the most sensitive to the tested samples. By following the scientific study with the yeast *C. neoformans*, it was observed that it suffers total inhibition in the contact with EO in 12h and 16h by SA. After investigating the synergism between AS and other compounds from the EO, we observed that the MIC of Linalool is shorten four times from 500µg/ml to 125µg/ml against *C. neoformans*. The cytotoxicity from EO and SA was evaluated on J774 cells and the cytotoxic concentration for 50% of the cells (CC50) found was 122,4µg/ml and 565,22µg/ml for EO and SA respectively. Based on the results we concluded that the EO from *A. trilobata* and its major compound SA are potential antifungal, showing effectiveness in eliminating microorganisms in non-toxic concentrations as well as potential adjuvant to known drugs.

**Palavras-chave:** Plantas medicinais, óleo essencial, *Aristolochia trilobata*, acetato de sulcatila, antimicrobianos.

**Key-words:** Medicinal plants, essential oil, *Aristolochia trilobata*, sulcatyl acetate, antimicrobial activity.

**Agências de Fomento:** CNPq, FAPERJ, CAPES.