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Program and Abstracts

Antimicrobial activity of essential oil of *Cymbopogon citratus* (DC) Stapf. *Poaceae-Gramineae* from Angola in ATCC and multidrug resistant strains

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Cymbopogon citratus (DC) Stapf. Poaceae-Gramineae (C. citratus) is an herb from India, which grows in several countries in tropical and sub-tropical, as the Republic of Angola, where tea is known as caxinde. This tea is consumed, as aromatic drink, as well as in traditional cuisine due to its lemon flavor. Cymbopogon citratus (DC) is widelly used in folk medicine, where infusions and decoctions, feature anti-spasmatic, carminatives and anti-hypertension properties. The essential oil of C. citratus is often applied, in pharmaceutical industry, as flavor and fragrance, and is also used as a source of new phytochemical molecules for the development of new pharmaceutical products. The aim of this study is to evaluate the antioxidant activity of different extracts (ethanolic, methanolic and aqueous) of caxinde's leaves and assay the antimicrobial activity of essential oil of C. citratus against Staphylococcus aureus (ATCC 25923), Staphylococcus epidermidis (ATCC 12228), Enterococcus faecalis (ATCC 29212), Escherichia coli (ATCC 25922), Klebsiella pneumoniae (ATCC 13883), Proteus mirabilis ATCC 25933, Pseudomonas aeruginosa (ATCC 27853), Acinetobacter baumanni (ATCC 19606), Candida albicans (ATCC 10231), C. parapsilosis (ATCC 2219) and C. tropicalis (ATCC 750) and multi-drug hospital resistant strains . The aqueous extract showed high antioxidant action compared to a standard synthetic antioxidant (BHT). This result suggests that the aqueous extract could be used in human, as scavenger of free radicals. The essential oil was obtained by hydro-distillation of dried plants. Anti-microbial activity of essential oil and majority compound, the citral, was evaluated by the NCCLS/CLSI with injunction on growth of all the strains tested, dependent of concentration. The essential oil as high antimicrobial activity against Gram-positive, meticillin-resistant strains or not, and yeasts.

Keywords: Cymbopogon citratus, essential oil, antibacterial and antifungal activity, multi-resistant clinical strains

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