

Antifungal Activity of Citronellal on *Candida albicans* Isolates of Pediatric Clinical Importance

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SUMMARY. Citronellal is a plant-derived monoterpene alcohol that has a broad spectrum of activity. The aim of this study was to evaluate citronellal for antifungal activity against *Candida albicans* isolates of pediatric clinical importance. The minimum inhibitory concentration (MIC) and the minimum fungicidal concentration (MFC) were determined by broth microdilution techniques. We also investigated possible citronellal action on cell walls (0.8 M sorbitol) and cell membranes (citronellal to ergosterol binding). For 90% of isolates, the MIC and MFC of the phytochemical was 128 µg/mL. Involvement with the cell wall and ergosterol binding were excluded as possible mechanisms of action. Thus, citronellal showed *in vitro* antifungal potential against strains of *C. albicans*, but did not involve action on the cell wall or ergosterol and further study is needed to completely describe its mechanism of action.

RESUMEN. Citronelal es un alcohol monoterpeno que tiene un amplio espectro de actividad. El objetivo de este estudio fue evaluar la actividad antifúngica de citronelal frente a aislados de *Candida albicans* de importancia clínica pediátrica. La concentración inhibitoria mínima (MIC) y la concentración fungicida mínima (MFC) se determinaron mediante microdilución en caldo. También se investigó la posible acción de citronelal sobre las paredes celulares (sorbitol 0,8 M) y las membranas celulares (unión citronelal a ergosterol). Para el 90% de los aislamientos, los valores de MIC y MFC para citronelal fueron de 128 µg/mL. La interacción con la pared celular y la unión al ergosterol se excluyeron como posibles mecanismos de acción. Por lo tanto, si bien el citronelal mostró potencial antifúngico *in vitro* contra las cepas de *C. albicans*, su acción no implica efecto sobre la pared celular o el ergosterol, por lo que se requiere de mayores estudios para describir completamente su mecanismo de acción.

KEY WORDS: antifungal activity, *Candida albicans*, citronellal, pediatric.

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