Abstract

**BACKGROUND:** Different species of Croton are used in traditional Amazonian medicine. Among the popular uses are treatment of bacterial diseases, poorly healing wounds and fevers.

**OBJECTIVE:** This study evaluated the antileishmanial, antiplasmodial and antimicrobial activities of the extracts and diterpenes of Croton palanostigma Klotzsch (Euphorbiaceae).

**MATERIALS AND METHODS:** Leaves and bark were extracted with dichloromethane and methanol. The bark dichloromethane extract (BDE) was chromatographed on a column, obtaining cordatin and aparisthman. The extracts and diterpenes were assayed thought agar disk diffusion method and their bactericidal or fungicidal effects were evaluated by minimum bactericidal or fungicidal concentration. The antiplasmodial activity was evaluated after 24 and 72 h of exposition. The antileishmanial activity was performed on promastigotes forms of Leishmania amazonensis.

**RESULTS:** The bark methanol extract (BME) and cordatin were not active against any microbial strains tested; BDE and leaves methanol extract (LME) were positive for Pseudomonas aeruginosa and aparisthman was positive for Candida albicans. In the determination of the minimum bactericidal concentration, neither of them were active in the highest concentration tested. The extracts and diterpenes were inactive in Plasmodium falciparum, except the LME in 72 h. Any extract was shown to be active in promastigote forms of L. amazonensis.

**CONCLUSION:** These results indicate that the BDE and LME did not inhibit the bacterial growth, then they probably had bacteriostatic effect. LME presented activity in P. falciparum.

**KEYWORDS:** Antileishmanial; Croton palanostigma; Euphorbiaceae; antimicrobial; antiplasmodial; diterpenes

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