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Antimicrobial Activity of Dracaenacinnabari from Soqotraislandon Multidrug Resistant Human Pathogens and Ascosphaeraapis, a Causal Agent of Chalkbrood Disease of Honeybee

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Abstract: *Antimicrobial activity of resin of Dracaena cinnabari from Soqotraislandon multidrug resistant Gram positive and Gram negative human pathogens, Candidaalbicans and Ascosphaeraapis was studied.Antimicrobial activity of ether extract of Dracaena cinnabariwas evaluated using agar disc diffusion method against different human bacterial and fungal pathogens including E. coli ATCC 10402, Klebsiella pneumonia ATCC 10031, S. aureus 29212, P. aeruginosa ATCC 2785, Salmonella typhimurum ATCC 3311, C. albicans ATCC 10231,andAspergillusnidulans, and Ascosphaeraapis; a causal organism of chalkbrood disease in honeybee. The plant materials were extracted with 70% ethyl and different concentration was made by dilution with nutrient broth. For screening, filter paper discs impregnated with extract and placed on the surface of the inoculated media agar plates were used. Determination of the MIC of extracts was carried out by the broth microdilutionmethod.The controls were equivalent quantities of 70% ethyl alcohol and nutrient broth. Extract of Dracaena cinnabariresin showed a considerable antimicrobial activity against all the pathogens tested. The zone of inhibition was between 4.9-11.5 mm. The most sensitive microbe was S. aureus and least sensitive wasAspergillusnidulans. MIC of the extract against E. col ATCC 10402, Klebsiella pneumonia ATCC 10031, andS. aureus 29212 was1.25 % (w/v) and for the other pathogens was 2.5 % (w/v). It might be concluded that ether extract of Dracaena cinnabari has a powerful antimicrobial activity against Gram positive and Gram negative human pathogens and against Ascosphaeraapis. This extract might pose a role in the management of microbial infections in both human and bees.*

Keywords: *Antimicrobial, Dracaena cinnabari, Human Pathogens, MIC*