SCREENING OF SOME QATARI PLANT EXTRACTS FOR ANTI FUNGAL ACTIVITIES OF PLANT PATHOGENIC FUNGI

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Abstract

The present study aimed to evaluate the antifungal activity of three desert plants extracts grown naturally in Qatar: (Al-rayhan) Ocimum basilicum, Shafallah (Capparis spinosa) and Qwaif(Prosopis juliflora) to study their inhibitory effect against three pathogenic fungi: Aspergillus niger, Fusarium oxysporum and Giberella baccata. Samples were collected from Qatar University farm. Filter disk method was used for antagonistic study and four chemical solvents: distilled water, n-butanol, ethyle acetate and chloroform were used to extract the plant materials. The fungi were diluted by DMSO and then treated by 0.5, 10 and 20 mg/ml concentration of extracts in addition to the control group. The study revealed that Capparis spinosa and Prosopis juliflora extracts had the highest inhibitory effect against Aspergillus niger, Fusarium oxysporum and Giberella baccata while Osmium basilicum of n-butanol and chloroform extracts showed no significant effect on Gibberella baccata. Distilled water and ethyl acetate extracts of Osmium basilicum at 20% concentration showed high inhibition against Gibberella baccata. The study revealed that ethyl acetate at 20% concentration significantly reduced Aspergillus niger growth when treated with Prosopis juliflora and Capparis spinosa extracts (0.88 and 0.93 cm), respectively. Ocimum basilicumsosignificantly minimized the growth of Fusarium oxysporum (0.92 cm) using the same solvent concentration. It could be concluded that the studied plants are promising in the treatment of pathogenic fungi when treated using the appropriate solvents and concentration.