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Antifungal activity of *Zingiber officinale* against selected fungi

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Abstract

The use of plants for the preparation of medicines has been increased in the world due to the presence of antimicrobial agents in the plants. Antimicrobial agent is a compound which selectively destroys or inhibits the growth of microorganisms. Herbal medicine is a source of health maintenance and cure of diseases for the increasing population in the world although several antimicrobial agents have been found to treat microbial infections. Misuse and overuse of antimicrobial agents has led microorganisms to develop resistance against antimicrobial agents. So the constant discovery of new antibiotic agents has become necessary in the world. Many plants produce secondary metabolites which have the antimicrobial compounds like terpenes, sesquiterpenes and phenolic compounds etc. The present study was conducted to determine the antifungal activity of different solvent extracts of *Zingiber officinale* against some selected fungi namely *Fusarium* sp., *Rhizopus* sp., *Aspergillus* sp., *Mucor* sp. and *Penicillium* sp. by disc method. All the crude ginger extracts showed various levels of inhibitory effects on the growth of the tested fungi. The water extract of fresh ginger showed highest percentage of inhibition of 29.10% against *Penicillium* sp. among all the tested fungi. The percentages of inhibition of *Fusarium* sp. and *Mucor* sp. were <10.70% when tested with water extract of fresh ginger. The methanol and chloroform extracts of dried ginger showed the highest percentage of inhibition as 100% against *Fusarium* sp. Dried ginger extract had the lowest percentage of inhibition as 33.33% against *Penicillium* sp. in all the organic solvents. The methanol and chloroform extracts of dried ginger showed more inhibition than that of water extract against all the fungi.

Keywords: Antifungal activity; Ginger; *Zingiber officinale*; Fungi