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Comparison of antifungal activity of rhizomes of *Zingiber officinale* from different zones in Sri Lanka against selected fungi

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Plants have been the source of food, medicine and several other day-to-day life products since ancient times. Many plants have been proven to have medicinal value due to the presence of antimicrobial compounds. Nowadays, there is a lot of global effort being put into discovering antifungal agents made from natural materials. Many plants produce secondary metabolites like terpenes, sesquiterpenes and phenolic compounds that have antimicrobial activity. Many secondary metabolites of plants are commercially important and find use in a number of pharmaceutical compounds. These compounds are concentrated in particular plant parts that can be used for the preparation of medicine. The present study was conducted to compare the antifungal activity of ginger rhizomes grown in three climatic zones in Sri Lanka. For the experimental studies, five fungal species, namely *Fusarium sp.*, *Rhizopus sp.*, *Aspergillus sp.*, *Mucor sp.* and *Penicillium sp.* were used. The percentage of inhibition by different rhizome extracts against the fungi was tested by medium incorporation method. Aqueous ginger extract inhibited *Penicillium* sp. significantly (29.10 %) while dried ginger extracts in organic solvents inhibited *Fusarium* sp. (100 %) followed by *Rhizopus* sp. (84.44 %).and *Mucor* sp. (53.84 %). There is no significant difference between the ginger obtained from wet and dry zone while ginger extracts from intermediate zone showed more percentage of inhibitions against fungi compared to ginger obtained from other two zones in organic solvents. These variations are due to different levels of pungency of ginger rhizomes, genetic diversity, and geographical locations of the ginger growing in different climatic zones.

Keywords: *Antifungal activity, Ginger, Zingiber officinale, Zones, Sri Lanka.*