Evaluation of Inhibitory effect of *Clitorea ternatia* flower extract on the growth of Keratinophilic fungi isolated from Siliguri, West Bengal, India using Foldscope as a research tool.

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Abstract

Objectives: This study aimed to evaluate the inhibitory effect of *Clitorea ternatia* flower extract on the growth of Keratinophilic fungi isolated from Siliguri, West Bengal, India using Foldscope as a research tool.

Methods: A genus of fungi known as keratinophilic fungi is important to the environment because they break down keratin protein. These keratinophilic fungi can also cause cutaneous infections (dermatophytosis) of keratinized tissues in humans and animals.

Siliguri, situated in the Northern part of west Bengal at the latitude & longitude of 26° 42′ 36″ N, 88° 25′ 48″ E, the climate is tropical and the geographic diversity makes it an area of interest. Six samples from various sites in Siliguri were collected using Foldscope, an incredibly affordable paper microscope modeled using origami, wherein some species of keratinophilic fungi were identified.

Results: *Clitorea ternatia* flower extract was prepared and assayed for antifungal bioassay. There was a significant reduction in the weight of fungal mycelium & the diameter of the fungal colony.

Conclusion: It was concluded that *Clitorea ternatia* flowers can inhibit the growth of keratinophilic fungi, and as such, they can be a significant therapeutic intervention for dermatophytic fungus-related superficial skin disorders.

Keywords: Antifungal activity; *Clitoria ternatia* L.; Foldoscope, Dermatophytic infections.

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