

Research Article

Diversity and Characterization of Rhizosphere Mycobiome of Medicinal Plant Halobiont *Trillium govanianum* Growing in Kashmir Himalayas

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Abstract

Microbiome in the rhizospheric zone of plant plays an important role in its survival and proliferation by providing tolerance and resistance to abiotic stress as well as significantly contributes in enhancing the production of bioactive compounds in plants. *Trillium govanianum* Wall. ex D. Don growing in Kashmir has an immense medicinal importance due to presence of many bioactive compounds. The fungi associated with medicinal plants growing in the Himalayan region has been explored to a very less extent. In this regard, the present study was undertaken to unravel the rhizospheric fungal diversity of *T. govanianum*. Twenty fungal species viz., *Alternaria alternata*, *Ulocladium chartarum*, *Scopulariopsis brevicaulis*, *Mortierella alpina*, *Mucor circinelloides*, *Exserohilum rostratum*, *Aspergillus niger*, *A. flavus*, *A. fumigatus*, *Fusarium oxysporum*, *F. solani*, *F. metavorans*, *Chaetomium globosum*, *Moniliophthora roreri*, *Penicillium chrysogenum*, *P. expansum*, *Trichoderma longibrachiatum*, *T. harzianum*, *T. viride* and *Paecilomyces lilacins* were isolated from the rhizospheric soil samples that were collected from different sites of Kashmir valley. These fungi were identified on the basis of morphological, cultural and microscopic characteristics.

Key words: Microbiome, rhizospheric soil, *Trillium govanianum*

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