

## Research Article

## Isolation and Characterization of Endophytic Fungal Communities of *Vitis vinifera* Fruits Growing in Kashmir Valley

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### Abstract

The aim of this study was to isolate, identify, and determine the frequency of colonization of the endophytic mycobiome from the fruits of *Vitis vinifera* L. in the Kashmir Valley. A total of 13 endophytic fungi were isolated from the fruits of *V. vinifera* L. by adopting the standard isolation protocol. The isolated endophytic fungi were *Chaetomium globosum*, *Trichothecium roseum*, *Trichoderma asperellum*, *Epicoccum viticis*, *Curvularia lunata*, *Nigrospora oryzae*, *N. sphaerica*, *Aspergillus oryzae*, *Talaromyces purpurogenus*, *Alternaria tenuissima*, *Fusarium oxysporum*, *Arthrinium arundinis* and *Bipolaris spicifera*. The Colonization rate and isolation rate of isolated endophytic fungi were also determined. From the study, it was clear that both the colonization rate and isolation rate vary among different isolated endophytic fungi and the most abundant endophyte was found to be *Epicoccum viticis*, followed by *Nigrospora oryzae*. Thus, different endophytic fungi with varying colonization frequencies were found associated with *Vitis vinifera* in the Kashmir Valley.

**Key words:** Colonization rate, Endophyte, Fragment plating technique, Grapes, Isolation rate

**Citation:** Yousuf H, Malik WS, Wani AH, Mushtaq T and Bhat MY. 2023. Isolation and characterization of endophytic fungal communities of *Vitis vinifera* fruits growing in Kashmir Valley. *J Mycol Pl Pathol* 53 (4): 370-378