CULTURAL, MORPHOLOGICAL AND MOLECULAR CHARACTERIZATION OF VINCA ALKALOIDS PRODUCING ENDOPHYTIC FUNGUS *FUSARIUM SOLANI* ISOLATED FROM *CATHARANTHUS ROSEUS*

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ABSTRACT

We have isolated fifty-two endophytic fungi (AA-CRL-1 to AA-CRL- 52) from the leaves of *Catharanthus roseus* plants collected from different parts of Pune (Maharashtra, India). These endophytic fungi represented different genera and were screened for vinca alkaloids production using TLC and ESI-MS analysis. Out of the 52 endophytic fungal cultures screened, the endophytic culture AA-CRL-20 was found to produce vinca alkaloids (Vinblastine and Vincristine) extracellularly. The endophytic fungal strain AA-CRL-20 which produced vinca alkaloids was identified as *Fusarium solani* based on its cultural and morphological characters and internal transcribed spacer (ITS) sequence analysis.

KEYWORDS: Endophytes, *Catharanthus roseus*, *Fusarium solani*, Vinblastine, Vincristine