

4th International Conference on **Biodiversity**

June 15-17, 2015 Las Vegas, USA

Mycoendophytic diversity associated with ethanomedicinal plants *Ficus pumila* linn and *Mirabilis jalapa* linn.

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Endophytic fungi are one of plant-associated microbiome which grows in healthy plant tissues for all or the most part of their life cycle without causing disease symptoms in the host plants. To expand knowledge about endophytic fungal diversity by culture-dependent technique the present study was undertaken. Two hundred-thirty eight (238) (19.83%) endophytic isolates were isolated from 1,200 plant tissue samples of stem and leaf collected from *Mirabilis jalapa* Linn. (Nyctaginaceae) and *Ficus pumila* Linn., (Moraceae) in three different seasons, namely summer, monsoon and winter. 238 endophytic isolates were categorized into 23 taxa, comprising 3 ascomycetes genera *Chaetomium* sp., *Sporormia* sp. and *Xylaria* sp. (10.92%), 5 coelomycetes genera *Colletotrichum* sp., *Pestalotiopsis* sp., *Phoma* sp., *Phomopsis* sp. and *Phyllosticta* sp. (18.06%), 11 hyphomycetes genera *Acremomium* sp., *Alternaria* sp., *Aspergillus* sp., *Cladosporium* sp., *Curvularia* sp., *Drechslera* sp., *Fusarium* sp., *Myrothecium* sp., *Nigrospora* sp., *Penicillium* sp. and *Trichoderma* sp. (55.46%), 2 zygomycetes genera *Mucor* sp. and *Rhizopus* sp. (2.94%), 2 morphospecies of Mycelia sterilia (8.4%). Colonization rates (%) of endophytic fungi for both the tissues were found to be relatively homogeneous (14.33% and 14.0%) and (18.66% and 18.33%) for *Mirabilis jalapa* and *Ficus pumila*. Endophytic fungal isolates were prevalent on leaf tissue of both plants (52.94%) than on stem tissue (47.0%). *Aspergillus flavus* and *Xylaria* sp., are dominant endophytic fungal genera in leaf while in stem species of *Fusarium* and *Pestalotiopsis* sp., were dominant in *Mirabilis jalapa* and *Ficus pumila* respectively. Endophytes segregated with varying degree of colonization during three sampling season among different tissues of the two hosts. There is no significant difference in Simpson, Shannon diversity and Species Richness indices values for *Mirabilis jalapa* due their relatively homogenous values. Overall diversity indices values for foliar endophytes of *Ficus pumila* were relatively high when compared to leaf and stem tissues of *Mirabilis jalapa*. But species richness was higher in stems of *Mirabilis jalapa* when compared with leaves and stems of *Ficus pumila* due the isolation 19 different endophytic fungal taxa.

Biography

Satish Sreedharamurthy has done M.Sc. and Ph.D. in Microbiology from University of Mysore and he has been awarded UPG: JRF (1996-98); UPG:SRF (1998-2000); CSIR:SRF (2000-01) Post Doctoral Raman Research Fellow (2014-2015). He appointed as an Assistant Professor in University of Mysore in 2003. Five Major Research Project awarded from various funding agencies namely UGC, DST, IOE, Govt. of India. Honoured Fellow of FISBT (2010) from International Society of Biotechnology. Guided 05 Ph.D. students in Microbiology. Published about 65 Research articles in National and International journals and also presented research findings in 80 National and International conferences and Symposia.

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