Endophytic fungi from *Tabernaemontana heyneana* Wall. (Apocynaceae) and their L-asparaginase activity

**Manasa**
University of Mysore, India

Tropical forests are storehouses of diverse life forms. Plants of these forests display huge wealth of diverse chemical molecules of medicinal value. The microbes residing within plant tissues ‘the endophytes’ are also important sources of secondary metabolites with immense implications in agriculture and medicine. Several compounds with anti-cancer, anti-microbial, anti-diabetic, anti-inflammatory, anti-malarial, insecticidal and immunosuppressive activities have been discovered to be produced by endophytes. *Tabernaemontana heyneana* Wall. a medicinal tree, endemic to Western Ghats with rich ethnobotanical history and unique chemical diversity was selected to study fungal endophytes and evaluate them for L-asparaginase activity. Fresh and healthy bark, twig, leaf and fruit samples were used for isolation of endophytes following standard isolation protocols. A total of 783 isolates belonging to 24 taxa were obtained. 9.2% comprised of bark isolates, 24.65% twig isolates, 34.22% leaf isolates, 15.60% fruit isolates and 16.35% of isolates from seeds. *Colletotrichum*, *Curvularia*, *Fusarium*, *Phomopsis*, *Verticillium*, *Aspergillus*, and *Volutella* were some of the fungal genera obtained as endophytes. *Fusarium* sp., *Phomopsis* sp.1, *Thlfl01*, *Phomopsis* sp.3 and *Fusarium* solani were dominant genera of bark, twig, leaf, fruit and seed samples respectively. Nine endophytic fungi were positive for the enzyme activity with *Fusarium* sp. and *Volutella* sp. showing good activity. Results indicate that endophytic fungi are potential sources of L-asparaginase enzyme used in the treatment of acute lymphoblastic leukemia.

**Biography**

I am Manasa, pursuing M.Phil. degree from University of Mysore, Department of Studies in Botany, Mysore, Karnataka under the guidance of Dr. M. S. Nalini, Assistant Professor, University of Mysore. I secured Third Rank in Master of Science for securing highest mark in the university. I have attended the South Zone Conference on Fungal Diversity and Emerging Crop Diseases in the year 2011 organized by Indian Society of Mycology and Plant Pathology, Udaipur.

manasa.chandramouli@gmail.com