

## Bio-Data

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Genetics was my favourite subject during my graduation time. In 1983, I did my under graduate degree from Government Science College, Jabalpur. I did my Masters Degree (Botany) in 1985, M.Phil in 1986 (Plant mycology) and PhD in 1992 (Life Sciences ,Plant Tissue culture) from Rani Durgavati University, Jabalpur. I joined this institute 1987 in Forest Genetics and Tree improvement Division and have since pursued active research activities on genetic and tree improvement programmes, by selecting and identification of plus trees of different forestry species, establishment of clonal seed orchards, selection of seed production areas, provenance trials and progeny trials. Clonal propagation protocols of different forestry, medicinal & aromatic plant species have been standardized through tissue culture and macropropagation. I standardize chemoprofiling techniques through HPLC for quantitative determination of bioactive compounds of useful medicinal plants and also standardize long term cryopreservation protocol of rare, endangered and threatened medicinal and aromatic plants. Genetic diversity assessment of plant species, wood forensic studies regarding origin of wood and wild life forensic study using molecular markers are the key research programme of my interest. Trained more than 2500 various staff holders in plant biotechnology. I was FAO fellow and obtained training from Forest Research Institute, Rotorua and Lincoln University, Christchurch, Newzealand in 1998. Presented papers in international congress at Indianapolis (USA) 2007 and Frankfurt (Germany) in 2015.

**Specialization:** Forest genetics, tree improvement; clonal propagation; chemoprofiling; conservation; forensic studies of plants, wild animals & biotechnology.

#### **Current Projects:**

- Genetic diversity assessment of *Boswellia serrata* and standardization of micro clonal propagation protocols through biotechnological interventions for the production of elite planting material
- Standardization and multiplication of clonal propagation protocol for commercially important forestry species *Anogeissus pendula*

- Development of integrated biotechnological package by genetic diversity assessment using molecular characterization, chemoprofiling, standardization of micropropagation and cryopreservation protocol of four RET species.
- Quantitative determination of bio-active compounds of highly threat medicinal plant species through chemoprofiling and standardization of propagation techniques using biotechnological interventions for their conservation

### Key Publications:

- S. K. Tiwari ; G. Krishnamurthy ; S. N. Dhamangaonkar ; M.P. Goswami and Pankaj. Saini (2015) Preliminary Studies on Clonal multiplication of *Berberis aristata* (Indian Barberry) by stem branch cutting: An Approach for Ex-Situ Conservation of Endangered Medicinal Plant. *International Journal of Indigenous Medicinal Plants*, ISSN: 2051-4263, Vol.48, 2 pp 162-166.
- G. Krishnamurthy, S. K. Tiwari\*, Amit Pandey and S.S. Yadav (2015) RAPD Markers for Genetic Diversity Assessment of Critically Endangered Medicinal Plant *Commiphora wightii* (Arn.) Bhandari. *International Journal of Current Research in Biosciences and Plant Biology* Vol 2 Number 8 pp. 29-34.
- S.K.Tiwari and Amit Pandey (2012), Quantitative determination of active alkaloid in *Withania somnifera* through high performance liquid chromatography for the production of quality planting stock. *Journal of Tropical Forestry*, July-September, Vol.28 (III) pp. 47-51.
- S.K.Tiwari and Amit Pandey (2010), Standardization of clonal propagation techniques of *Litsea glutinosa* (Maida lakdi) through stem branch cuttings, July-Septemembr, Vol.26 (III) pp. 23-25.
- S.K.Tiwari (2010) Chemoprofiling of *Andrographis peniculata* (Kalmegh) for its andrographolide content in M.P., India, *international Journal of Pharma and Bio Science*, V1 (2). pp - 1-5.
- S.K.Tiwari; K.P.Tiwari and E.A.Siril (2002), An improved micropropagation protocol for teak. *Plant cell, Tissue and Organ Culture*, 77:1-6.
- S.K.Tiwari (1995), Micropropagation of economically medicinal plant *Rauwolfia serpentina* through tissue culture from excised apical nodal explant, *Journal of Tropical Forestry*, April- Jun., Vol. 11 (II), pp. 121-124.

- S.K.Tiwari ; Ram Prasad (1994) Clonal multiplication of *Gmelia arboria* Roxb through micropropagation techniques, *Journal of Tropical Forestry*, July- Sept., Vol. 10 (III), pp. 189-191.
- S.K.Tiwari.(1992) Biotechnology approaches in forestry with special reference to forestry in MP. Vegetative Propagation and Biotechnologies for Tree Improvement. Book Ed. by K. Keseva Reddy pp. 129-131.