

Name: Dr. Satish Kumar Verma

Designation: Assistant Professor

Qualification:

Ph.D. in Botany, BHU, Varanasi, 2014
M.Sc. Botany, BHU, Varanasi, 2007 (86.8%)
B. Sc. (Bot. and Chem.), VBSPU, Jaunpur, 2004 (68%)
Intermediate (12th), UP Board, 2001 (66.8%)



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Teaching Experience: 2 Years

Presently I am teaching Plant Biochemistry in B.Sc. and M.Sc., Plant physiology-Biochemistry in B.Sc. (Allied). I am also teaching part of special paper 'Plant Physiology and Biochemistry', and some methodology content of Ph.D. course work.

Research Experience: 6 Years

Major Area of Work

Biochemical and molecular study of 'Microbial Endophytes' with reference to: Secondary metabolites, Enzymes, and their biotechnological application.

Research areas/Interest:

Presently my research focus is on bio-prospecting of 'microbial endophytes'. Endophytic Microbes are well known to produce novel bioactive natural products like antimicrobial, anticancer, antimalarial, antioxidant, antiviral and immunosuppressive compounds and also source of exo-enzymes of great importance. I am acquainted with techniques of isolation, identification and characterization of endophytic fungi and their metabolites using microscopic, molecular (ITS rDNA), chromatographic (TLC, HPLC, GC-MS) and spectroscopic techniques. Bioassay dependant characterization of active metabolites isolated from fungal endophytes with statistical analysis.

Further I am looking for plant-microbes interaction specially to understand the role of

endophytic microbes at biochemical and molecular level in improvement of fitness of plants.

Awards and Honours:

1. GATE-2007 Qualified with rank- 116, score - 491
2. CSIR NET LS (JUNE, DEC. 2007)
3. CSIR NET JRF (JUNE 2008): Qualified for SPM interview call
4. Selected as **Council Member of Mycological society of India**, Chennai.

Significant publications:

In Journals

1. **Satish K. Verma**, S. K. Gond, A. Mishra, V. K. Sharma, J. Kumar, D. K. Singh, A. Kumar, J. Goutam & R. N. Kharwar (2014) Impact of environmental variables on the isolation, diversity and antibacterial activity of endophytic fungal communities from *Madhuca indica* Gmel. at different locations in India. *Annals of microbiology* 64:721-734.
2. Jyoti Goutam, Vijay K. Sharma, **Satish K. Verma**, Dheeraj K. Singh, Jitendra Kumar, Ashish Mishra, Anuj Kumar and R.N. Kharwar (2014). Optimization of Culture Conditions for Enhanced Production of Bioactive Metabolites Rich in Antimicrobial and Antioxidant Activities Isolated from *Emericella quadrilineata* an Endophyte of *Pteris pellucida*. *Journal of pure and applied microbiology* Vol. 8(3) 2059-2073
3. Surendra K. Gond , Ashish Mishra Vijay K. Sharma, **Satish K. Verma**, Ravindra N. Kharwar (2013) Isolation and characterization of antibacterial naphthalene derivative from *Phoma herbarum*, an endophytic fungus of *Aegle marmelos*. *Current Science*, Vol. 105, No. 2.
4. Anuj Kumar, S K Gond, A Mishra, V K Sharma, **S K Verma** and, R N Kharwar (2013) Role of Different Variables on Site-Specific Isolation And Distribution Patterns of Soil Mycoflora from Varanasi. *Vegetos* 26 (1) : 88-95.
5. Ambika Srivastava, Pooja Singh, Rajesh Kumar, **Satish Kumar Verma** and Ravindra Nath Kharwar (2012) Indole-based polymer and its silver nanocomposite as advanced antibacterial agents: synthetic path, kinetics of polymerization and applications. *Polymer international* DOI 10.1002/pi.4283.
6. Ashish Mishra, Surendra K. Gond, Kumar A, Vijay K. Sharma, **Satish K. Verma** and Ravindra N. Kharwar, Anuj Kumar and T. N. Seiber (2012) Season and tissue type affect fungal endophyte communities of the Indian medicinal plant *Tinospora cordifolia* more strongly than geographic location. *Microbial Ecology* DOI 10.1007/s00248-012-0029-7.
7. Ravindra N. Kharwar, **Satish K. Verma**, Ashish Mishra, Surendra K. Gond, Vijay K.

Sharma, Talat Afreen and Anuj Kumar (2011) Assessment of diversity, distribution and antibacterial activity of endophytic fungi isolated from a medicinal plant *Adenocalymma alliaceum* Miers. *Symbiosis* (2011) 55:39–46.

8. Surendra K. Gond, Ashish Mishra, Vijay K. Sharma, **Satish K. Verma**, Jitendra Kumar, Ravindra N. Kharwar and Anuj Kumar (2011) Diversity and antimicrobial activity of endophytic fungi isolated from *Nyctanthes arbor-tristis*, a well- known medicinal plant of India. *Mycoscience* DOI 10.1007/s10267-011-0146-z.
- 9.
10. **Satish K. Verma**, Manoj K. Rai, Pooja Asthana VS, Jaiswal, U Jaiswal (2010) *In vitro* plantlets from encapsulated shoot tips of *Solanum nigrum* L. *Sci Hort* 124: 517–521.

Book chapters

1. Chapter 26: A. Mishra , S.K. Gond , V.K. Sharma , **S.K. Verma**, R.N. Kharwar and A Kumar (2011) Sourcing the fungal endophyte: A beneficial transaction of biodiversity, bioactive natural products, plant protection and nanobiotechnology. T. Satyanarayana et al. (eds.), *Microorganism in sustainable agriculture and biotechnology*. Springer science: DOI 10.1007/978-94-007-2214-9_26.
2. R. N. Kharwar, A. Mishra, V. K. Sharma, S. K. Gond, **S. K. Verma**, A. Kumar, J. Kumar, D. K. Singh and J. Goutam (2014). Diversity and Biopotential of Endophytic Fungal Flora Isolated from Eight Medicinal Plants of Uttar Pradesh, India. R. N. Kharwar et al. (eds) *Microbial Diversity and Biotechnology in Food Security*. DOI 10.1007/978-81-322-1801-2_3, Springer India.