Dr. Sandeep Singh
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Educational qualification:

- **Ph. D.** entitled **"Active constituent variation and genetic diversity studies of endangered medicinal herb *Saussurea lappa* C. B. Clarke"** from **HAPPRC, HNB Garhwal University**, Srinagar Garhwal, Uttarakhand.
- **M.Tech.** in **Biotechnology** from **G.B. Pant Engineering College Pauri (Uttarakhand Technical University, Dehradun)**, Pauri Garhwal (Uttarakhand).
- **M.Sc.** in **Botany** from **H.N.B.Garhwal University,** Srinagar Garhwal (Uttarakhand).
- **B.Sc.** with subjects **Zoology, Botany & Chemistry** from **H.N.B.Garhwal University,** Srinagar Garhwal (Uttarakhand).

Other qualification:

- Qualified **State Eligibility Test** for Assistant Professor conducted by Kumaun University, Nainital

Teaching experience:

- Working as guest assistant professor at **Department of Botany, government Model Degree College Devidhura, Champawat.**
- Worked as guest assistant professor for Four years at **Department of Botany, HNB Garhwal University , Srinagar Garhwal, Uttarakhand.**
- Worked as guest assistant professor at **Department of Biotechnology, G. B. Pant Institute of Engineering and Technology, Pauri Garhwal, Uttarakhand.**
- Provided teaching and research assistance for 5 years during Ph.D. at **HAPPRC, HNB Garhwal University, Srinagar Garhwal, Uttarakhand.**

Research experience:

- Worked as a **Junior Research Fellow** in project entitled **"Standardization of technology intervention and large scale production of quality planting material (QPM) for cultivation of *Nardostachys jatamansi*: a critically endangered medicinal herb of higher Himalaya"** funded by **National Medicinal Plants Board, New Delhi** in HAPPRC, HNB Garhwal Central University, Srinagar Garhwal, Uttarakhand.
- Nine month M.Tech. Biotechnology Dissertation entitaled **"*in vitro* seed germination and micropropagation of *Nardostachys jatamansi* DC.-an endangered medicinal herb",** from HAPPRC, HNB Garhwal Central University, Srinagar Garhwal, Uttarakhand.

Trainings:

- Fifteen days summer training on **Bioinformatics and Biotechnology** at **Department of Molecular Biology & Genetic Engineering, C.B.S.H., G.B.Pant University of Agriculture and Technology, Pantnagar, Uttarakhand**.
- Six days advanced training program on **"Recent trends in plant biotechnology and transgenics"** sponsored by **State Biotechnology Department (Ministry of Science and Technology) Govt. of Uttarakhand** at **Thapar University, Patiala**.

Research publications:

Propagation of *Cinnamomum tamala* through air layering – A simple and clonal method of propagation. Vijay K Purohit, **Sandeep Singh**, A.R. Nautiyal, P. Prasad, Harish C. Andola and Keshav C. Gairola. National Academy Science Letters, 2011, Vol. 34, No. 7 & 8, 253-256.

- **Role of plant tissue culture in propagation and conservation of threatened medicinal and aromatic plants- An overview form Indian Himalayan region.** Vijay Kant Purohit, Aprajita Mishra, **Sandeep Singh**, Harish Chandra Andola and Keshav Chandra Gairola. Plant biodiversity utilization and biotechnology ed. A. Bijalwan and C.P. Kala. (2013) Aavishkar Publishers, distributers. ISBN 978-81-7910-436-1.
- **Micropropagation of *Valeriana wallichii* DC. (Indian Valerian) through nodes**. **Sandeep Singh,** Vijay K Purohit, P. Prasad and A.R. Nautiyal. Indian journal of biotechnology, 2015, Vol. 14, pp- 127-130.
- ***In vitro* propagation of Rudraksha (*Elaeocarpus sphaericus* (Gaertn.) K. Schum): a biotechnological approach for conservation.** Kumud Saklani, **Sandeep Singh,** Vijay K Purohit, P. Prasad and A.R. Nautiyal. Physiology and molecular biology of plants, 2015, DOI 10, 1007/s12298-

015-03116-0.

- **Chemical and biological evaluation of essential oil from *Saussurea costus* (Falc.) Lipsch. collected from Garhwal Himalaya collected at different harvesting periods.** Cristina Benedetto, Maurizio D'Auria, Marisabel Mecca, Pratti Prasad, Pramod Singh, **Sandeep Singh**, Chiara Sinisgalli and Luigi Milella. Natural product research, 2018, DOI: 10.1080/14786419.2018.1440219.

Research skills:

- Molecular biology: analysis of genetic diversity using molecular markers, DNA fingerprinting, isolation and analysis of DNA and protein
- Plant tissue culture: micropropagation, suspension culture, *in vitro* secondary metabolite production, hairy root production.
- Plant biochemistry: extraction, purification, characterization and analysis of plant secondary metabolites.
- Plant propagation, seed germination, nursery establishment and agro techniques development
- Ecological sampling, phytosociology, germplasm collection, soil analysis.

Declaration:

I hereby declare that above statements are true to the best of my knowledge.

(Sandeep Singh)