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Ongoing Research Projects

- Molecular and agronomic evaluation of in vitro developed tolerant tomato somaclones against devastating disease Fusarium wilt funded by Department of Environment, Science & Technology, Shimla (HP) for ₹ 6.55 lakhs from April 2023 to March 2025 (Co-PI).
- Production of quality planting material of commercially important fruit crops through tissue culture" funded by H.P. State Govt. (Research and Development Fund Scheme) from April 2023 to March 2025 (Co-project Investigator).

Important Research Publications

- Kumar V, Garima, Sharma R, Thakur A, Sharma P, Sharma YP, Thakur A and Sharma S. 2024. Conserving industrially important endangered medicinal herb *Trillium govanianum* (Himalayan Trillium) through biotechnological based interventions. *Plant Cell Tissue and Organ Culture* 159:3. https://doi.org/10.1007/s11240-024-02862-x
- Kapoor B, Sharma M, Sharma R, Zadokar A, Thakur A, Sharma P, Kumar S, Rozar KP, Kumar KS, Hegde N and Pandey D. 2023. *De novo* transcriptome profiling and development of novel secondary metabolites based genic SSRs in medicinal plant *Phyllanthus emblica* L. (Aonla). *Scientific Reports* 13 (1):17319.
- Shaunak I, Sharma R, Sharma P, Gupta M, Bhardwaj RK. 2023. Developing resistance against soil-borne Fusarium pathogen causing tomato wilt through in vitro cell line selection. Plant Cell Tissue and Organ Culture 153:91-104.
- Thakur M, Kumar R, Sharma P and Sharma R. 2023. Assessment of genetic purity and earliness in F1 and F2 population of cucumber (*Cucumis sativus* L.) using SSR markers. *Genetika-Belgrade* 55(1):33-44.
- Thakur D, Sharma P, Sharma R, Kumari C and Rana VS. 2022. Critical factors governing the efficient direct organogenesis in green-fleshed Kiwifruit (*Actinidia deliciosa*) [A. Chev.] var. deliciosa. In Vitro Cellular and Developmental Biology-Plant 58: 1107–1116.

- Sharma H, Sharma P and Sharma R. 2021. Transferability of apple and pear SSRs to other temperate pome fruits of family Rosaceae. *Genetika-Belgrade* 53(1):195-208.
- Sharma R and **Sharma P**. 2019. Assessing genetic variation using arbitrary oligonucleotide markers system in apple genotypes. *Indian Journal of Horticulture* **76**(4): 581-589.
- **Sharma P** and Sharma R. 2018. DNA fingerprinting of peach (*Prunus persica*) germplasm in accessing genetic variation using arbitrary oligonucleotide markers system. *Indian Journal of Biotechnology* **17**(3): 484-491.
- Rana M, Sharma R, Sharma P, Bhardwaj SV and Sharma M. 2014. Estimation
 of genetic diversity in Capsicum annuum L. germplasm using PCR-based
 molecular markers. National Academy Science Letters 37(3): 295-301.
- Sharma R, Modgil M, Sharma P and Saini U. 2012. Agrobacterium-mediated gene transfer studies in apple (Malus x domestica Borkh.) rootstock MM106. Indian Journal of Horticulture 69(1): 1-6.

Books and Manual

• Kumar P, **Sharma P**, Singh A, Sharma S, Thakur M and Sharma R. 2023. *Practical Manual on Elementary Plant Biotechnology*, Dr YS Parmar University of Horticulture and Forestry, Nauni, Solan (HP). p40.

Awards & Recognitions

- Awarded 'Best poster prize' on 'Plant tissue culture-based interventions for the propagation of *Actinidia* species' in 'XXII Biennial National Symposium on Climate Smart Agronomy for Resilient Production System and Livelihood Security' at ICAR-CCARI, Goa in November 2023.
- Life member-The Indian Science Congress Association.
- CSIR-Research Associateship (RA) from 2015 to 2017.
- DST-Senior Research Fellowship (SRF) from 2012 to 2015.
- DBT-Senior Research Fellowship (SRF) in 2011.
- Qualified ASRB-ICAR-National Eligibility Test (NET) for lectureship in Agricultural Biotechnology in 2009.