

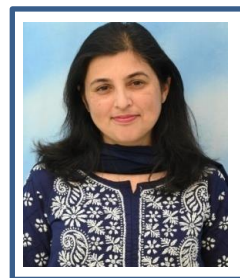
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Ongoing Research Projects

- Biotechnological interventions to develop basal rot resistant germplasm of garlic for cultivation in hilly regions funded by Department of Environment, Science & Technology, HP, from March 2022- March 2025 (Principal Investigator).

Important Research Publications

- Kumar, S., Singh, A., Bist, C. M. S., & Sharma, M. 2024. Advancements in genetic techniques and functional genomics for enhancing crop traits and agricultural sustainability. *Briefings in Functional Genomics*, Sep 27;23 (5):607-623. doi: 10.1093/bfpg/ela017.
- Kumar, S., Singh, A., Gupta, M., Bist, C. M. S., Gupta, B., & Sharma, S. 2024. Isolation, identification and multi-locus sequence typing of *Phytophthora capsici* from capsicum fields and its cross-infectivity in different crop species. *Physiological and Molecular Plant Pathology*, 134, 102413.
- Kumar, S., & Singh, A. 2024. In silico analysis to understand genetic variability, phylogenetic and phylogeographic relationships between *Phytophthora capsici* isolates infecting various crops. *Archives of Phytopathology and Plant Protection*, 1-22.
- Sharma, A., & Singh, A. 2023. A review on plant annexins: The calcium binding proteins with multifaceted roles in plant growth, development and stress tolerance. *South African Journal of Botany*, 162, 108-114.
- Tandon, A., Singh, A., Thakur, A., & Sharma, V. 2023. Nanomaterial mediated genome engineering for sustainable food production: Current status and future prospects. *Biocatalysis and Agricultural Biotechnology*, 102891.
- Thakur A, Singh A, Tandon A and Sharma V. 2023. Insights into the molecular mechanisms of uptake, phytohormone interactions and stress alleviation by silicon: a beneficial but non-essential nutrient for plants. *Plant Growth Regulation* 1-13 <https://doi.org/10.1007/s10725-023-01002-3>.
- Sharma R, Kaushik SK, Bhardwaj V, Singh A, Poonam, Kumar A, Bisht CM, Chakrabarti SK. 2019 Diversity analysis of potato advanced hybrids using morphological and SSR markers. *Potato Journal* 46 (1): 1-15.
- Shailja, Kanwar K, Soni M, Singh A. 2017 *In vitro* propagation and conservation of an endangered high value medicinal herb *Swertia chirayita* of temperate Himalayas. *Indian Journal of Plant Physiology* 22 (2):247-257.
- S Sharma, R Kaur and Singh A. 2017 Recent advances in CRISPR/CAS mediated genome editing for crop improvement. *Plant Biotechnology Reports* 11(4): 193-207.
- Singh A, Kaushal N, Sharma R, Bhardwaj V, Singh B and Singh R 2016. Effect of elevated temperature on in vitro microtubularization of potato genotypes with different thermotolerance levels. *Vegetos* 29(3):6-9.

- Singh A, Siddappa S, Bhardwaj V, Singh B, Kumar D, Singh BP 2015. Expression profiling of potato cultivars with contrasting tuberization at elevated temperature using microarray analysis. *Plant Physiology and Biochemistry* 97: 108-116.
- Singh A, Chand D and Pattanayak D. 2012. Purification and Characterization of potato RNase P. *Journal of Plant Biochemistry and Biotechnology* 22 (4): 425-433.
- Singh A, Chamail A, Chand D, Chakraborty SK and Pattanayak D. 2012. pUC-IVT, a modified pUC19 based in vitro transcription vector. *Journal of Plant Biochemistry and Biotechnology* 21(1):60–65.

Awards & Recognitions

- Overseas training under NAHEP-IDP at University of Melbourne Australia (March 2023).
- Received DST SERB Young Scientist Fellowship (March 2016).
- Second prize for poster presentation at National Seminar on Emerging problems of Potato held at ICAR-CPRI Shimla in November, 2014.
- Received DST Woman Scientist Fellowship (WOS-A) in applied science (March 2013).
- First prize for poster presentation at 'National Seminar on Gene Constructs' held at Indian Institute of Horticultural Research, Bangalore, India in May 2006.
- Qualified CSIR-UGC (NET-LS) 2002 and CSIR-UGC (NET-JRF) 2003.
- Received Junior Research Fellowship from University Grants Commission, Government of India, for pursuing Ph.D. (2003).
- Awarded merit scholarship by DBT, Government of India, during MSc.
- Qualified ICAR NET for lectureship in Agricultural Biotechnology.
- Honours certificate in BSc.