Name: Dr. Swati Singh
Research Group & Mentor: Plant developmental Biology group, Dr. Anandita Singh

Research Work/Project(s):

1. Engineering optimal Root system architecture in Brassicas for efficient Nitrogen foraging: Understanding the role and relationship between Brassica *MIR160* and *MIR167* and functional diversification of Brassica *MIR160* homologs in mediating response to nitrogen deprivation in *B. juncea* var. Varuna
   Tenure: 2nd August 2021 to 30th April 2024
2. Understanding and modulating *CAMTA3*: a potential heat stress activator for cuticle biosynthesis to engineer thermotolerant *B. juncea*
   Tenure: Ongoing (1st May 2024 to till date)

Fellowship Holder/Designation:

1. Central Scientific and Industrial research (CSIR) Research Associate (RA); **Tenure:** 2nd August 2021 to 30th April 2024
2. Women in Science and Engineering (WISE) Post-Doctoral Fellowship (WISE PDF); **Tenure:** Ongoing (1st May 2024 to till date)

Additional Information:

Research Publications (Up to 5 major publications):

Review Articles:

1. Choudhary, A. K., **Singh, S**., Khatri, N., & Gupta, R. (2021). Hydrogen sulphide: an emerging regulator of plant defence signalling. Plant Biology, 1–8.

2. Dikshit, P. K., Kumar, J., Das, A. K., Sadhu, S., Sharma, S., **Singh, S**., Gupta, P. K., & Kim,B. S. (2021). Green synthesis of metallic nanoparticles: a review. Catalysts, 11(902),259– 281.

Research Articles:

1. **Singh, S**., Geeta, R., & Das, S. (2023). Comparative Sequence and Functional Analysis of *KCS6* and *KCS5* from *Arabidopsis thaliana* and *Brassica juncea* Establishes Functional Equivalency and Role in Stress Management. Plant Molecular Biology Reporter. Accepted on 30 May 2023.

2. **Singh, S**., & Singh, A. (2021). A prescient evolutionary model for genesis, duplication and differentiation of *MIR160* homologs in Brassicaceae. Molecular Genetics and Genomics, 296(4), 985–1003.

3. **Singh, S**., Geeta, R., & Das, S. (2020). Comparative sequence analysis across Brassicaceae, regulatory diversity in *KCS5* and *KCS6* homologs from *Arabidopsis thaliana* and *Brassica juncea*, and intronic fragment as a negative transcriptional regulator. Gene Expression Patterns, 38, 119146.

4. **Singh, S.,** Das, S., & Geeta, R. (2018). A segmental duplication in the common ancestor of Brassicaceae is responsible for the origin of the paralogs *KCS6* - *KCS5*, which are not shared with other angiosperms. Molecular Phylogenetics and Evolution, 126(April), 331– 345.

5. Khatri, N., **Singh, S**., Hakim, N., & Mudgil, Y. (2017). Comparative expression profiling of *AtRAD5B* and *AtNDL1*: Hints towards a role in G protein mediated signaling. Gene Expression Patterns, 25–26, 167–174.

Book Chapters:

1. **Singh, S.,** Das, S., & Geeta, R. (2018). Role of Cuticular Wax in Adaptation to AbioticStress: A Molecular Perspective. In S. M. Zargar & M. Y. Zargar (Eds.), Abiotic Stress-Mediated Sensing and Signaling in Plants: An Omics Perspec5ve (pp. 155–182).

2. **Singh, S.,** Khatri, N., Katiyar, A., & Mudgil, Y. (2015). Molecular Approaches in Deciphering Abiotic Stress Signaling Mechanisms in Plants. In Elucidation of Abiotic Stress Signaling in Plants (pp. 41–73). New York, NY: Springer New York.

2. Das, S., **Singh, S**. (2023). “Small RNAs in Plants: Are These Magic Bullets for Imparting Climate Resilience in Crops?” In Non-Coding RNAs. CRC Press.

Magazine article:

1. **Singh, S.,** Geeta, R., & Das, S. (2016). Genetic elements involved in cuticle Biosynthesis and Regulation, with Emphasis on Plant Fatty Acid Elongase (3 keto acyl-CoA synthase) - A review. The Botanica, 125–143.