Name: Rakhi Tomar (https://orcid.org/0009-0007-1913-3996)

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

Co-Supervisor: Dr. Ashish Kumar (ICAR-National Institute for Plant Biotechnology)

Research Work/Project(s):

Identification and characterization of key effectors from *Erysiphe cruciferarum* haustorial transcriptome involved in pathogenesis of *Brassica juncea* var. Pusa Jaikisan

Fellowship Holder/Designation: CSIR-SRF Direct

Additional Information:

Publications:

(1) Mallikarjuna, Mallana Gowdra, **Rakhi Tomar**, Hirenalluru Chandappa Lohithaswa, Sarika Sahu, Dwijesh Chandra Mishra, Atmakuri Ramakrishna Rao, and Viswanathan Chinnusamy (2024) Genome-wide identification of potassium channels in maize showed evolutionary patterns and variable functional responses to abiotic stresses. *Plant Physiology and Biochemistry* 206: 108235.

(2) Partha Sarathi Basu, Aditya Pratap, Sanjeev Gupta, Kusum Sharma, **Rakhi Tomar** and Narendra Pratap Singh (2019) Physiological Traits for Shortening Crop Duration and Improving Productivity of Greengram (*Vigna radiata* L. Wilczek) Under High Temperature, Frontiers in Plant Science, 10:1508.

(3) Aditya Pratap, Nupur Malviya, Sanjeev Gupta, **Rakhi Tomar**, Vankat Raman Pandey and Umashanker Prajapati (2017) Field characterization of endemic wild Vigna accessions collected from biodiversity hotspot of India to identify promising genotypes for multiple agronomic and adaptive traits, Legume Research, Print ISSN:0250-5371/Online ISSN:0976-0571

(4) Aditya Pratap, Umashanker Prajapati, Chandra Mohan Singh, Sanjeev Gupta, Meenal Rathore, Nupur Malviya, **Rakhi Tomar**, Ajeet Kumar Gupta, Swapnila Tripathi and N.P. Singh (2018) Potential, constraints and applications of in vitro methods in improving grain legumes, Plant Breeding, doi: 10.1111/pbr.12590

(5) Aditya Pratap, Sushil K. Chaturvedi, **Rakhi Tomar**, Neha Rajan, Nupur Malviya, Mahender Thudi, P. R. Saabale, Umashanker Prajapati, Rajeev K. Varshney and N.P. Singh (2017) Marker assisted introgression of resistance to fusarium wilt race 2 in PUSA256, an elite cultivar of desi chickpea, Molecular Genetics and Genomics, doi 10.1007/s00438-017-1343-z

(6) Aditya Pratap, Sanjeev Gupta, **Rakhi Tomar**, Nupur Malviya, Ramanuj Maurya, Vankat Raman Pandey, Suhel Mehandi, Nerandra Pratap Singh (2016) Cross-genera amplification of informative microsatellite markers from common bean and scarlet runner bean for assessment of genetic diversity in mungbean (Vigna radiata), Plant Breeding, doi: 10.1111/pbr.123676

(7) Aditya Pratap, Sanjeev Gupta, Nupur Malviya, **Rakhi Tomar**, Ramanuj Maurya, K. Joseph John, Latha Madhavan, Narendra Pratap Singh. (2015) Genome scanning of Asiatic Vigna species for discerning population genetic structure based on microsatellite variation, Molecular Breeding, 35:178.

(8) Aditya Pratap, Partha Sarthi Basu, Sanjeev Gupta, Nupur Malviya, Neha Rajan, **Rakhi Tomar**, Latha Madhavan, Nagasami Nadarajan and Narendra Pratap Singh (2014) Identification and characterization of photo and thermo-insensitive sources of Vigna species, Plant Breeding, Vol. 133(6), pp 756-764

Brief Biography: Rakhi has master's degree in Biotechnology from Barkatullah University, Bhopal. Rakhi during her research tenure has gained proficiency in several areas. She can undertake field studies on plant pathology. She is trained in in-vitro disease screening, inoculation, and molecular plant pathology. She has technical know-how and can integrate experimental and informatics approaches to undertake characterization of gene family. Rakhi is well conversant with advanced bioinformatics, planning of gene expression studies including analysis of microarray datasets and NGS-RNA Seq data using appropriate analytical software. She is trained in microscopy and imaging. In terms of data analytics, she has a good understanding of basic statistical technique and can apply these appropriately for interpretation of measurable data. In terms of biological systems, Rakhi has worked with several crops including both cultivated and wild accessions of *Vigna, Chickpea, Maize and Brassica*. She is well versed with molecular breeding approaches.