

BARASAT GOVERNMENT COLLEGE

TEACHER'S PROFILE

DR RIDDHI DATTA, DEPARTMENT OF BOTANY

	: Assistant Professor (Stage2)
	: M.Sc., Ph.D.
> DATE OF JOINING THE SERVICE	: Mar 17, 2015
> DATE OF JOINING THE INSTITUTION	: Jan 11, 2025
Address for communication	: R-40, KAMDAHARI, GARIA, KOLKATA 700084
PHONE NO	: 9433084074
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	: Plant Molecular Biology
TEACHING EXPERIENCE	: UG teaching: 2015 onwards, PG teaching: 2025 onwards
COLLEGE SERVED	: (1) Dr. A. P. J. Abdul Kalam Government College (17.03.2015 - 10.01.2025) (2) Barasat Government College (11.01.2025 - Present)

ACADEMIC AND ADMINISTRATIVE EXPERIENCE	: Members of various academic and administrative committees
> TOPICS TAUGHT	: Plant Molecular Biology, Plant Physiology, Plant Pathology
AREA OF RESEARCH & INTEREST	 1. Our research focuses on unraveling role of small RNAs and glutathione in modulating plant responses to iron and phosphate deficiencies in Arabidopsis. 2. Another area aims to understand role of lectins in imparting drought and salt stress tolerance in rice. 3. We are working towards trait improvement of the under-utilised legume, grasspea using climate-resilient genome editing technology.
> ONGOING PROJECT DETAILS	 (1) POWER Research Grant, Science & Engineering Research Board (SERB), Government of India Project title: Investigating the role of miR393 in regulating iron homeostasis in Arabidopsis thaliana (Principal Investigator); 2023-2026 (2) WEA Research Grant, Science & Engineering Research Board (SERB), Government of India Project title: Designer legume: Development of genome-edited grass pea for neurotoxin free seeds (Principal Investigator); 2020-2023 (3) ECRA Research Grant, Science & Engineering Research Board (SERB), Government of India Project title: Dissecting the molecular mechanism of glutathione-mediated regulation of iron homeostasis in Arabidopsis thaliana (Principal Investigator); 2018-2021 (4) EMR Research Grant, Department of Biotechnology (DHESTBT), Government of West Bengal Project title: Molecular regulation of drought tolerance in rice with special reference to functional aspect of OsR40C1 protein (Co-Principal Investigator); 2017-2020
AWARD RECEIVED	 Selected awards and honours: 1. Indian National Young Academy of Sciences (INYAS) Membership (2024) 2. Young Botanist Award, Indian Botanical Society (2021) 3. Associate Fellow, West Bengal Academy of Science and Technology (2020) 4. Women Excellence Award, Science and Engineering Research Board, Govt. of India (2020) 5. Young Scientists Award, Indian Society of Plant Physiology (2018) 6. INSA Medal for Young Scientists, Indian National Science Academy (2017) 7. Gold Medalist in M.Sc. Botany (2011) and B.Sc. Botany Hons. (2009), University of Calcutta
> PATENT DETAILS	: NONE
> EXTRACURRICULAR ACTIVITIES	• Working on popularization of science through popular articles and science outreach programs
CAREER PROFILE	 B.Sc. (Honours) in Botany from Presidency College, University of Calcutta (2009) M.Sc. in Botany from University of Calcutta (2011) CSIR-NET (JRF), ICMR-NET (JRF), GATE (2011) Ph.D. from CSIR-Indian Institute of Chemical Biology (AcSIR; 2016) Peer reviewer for various journals including New Phytologist (IF 8.3), BMC Plant Biology (IF 4.3), Scientific Reports (IF 3.8), BMC Genomics (IF 3.5), PlosOne (IF 2.9). Research Guidance: Research fellow (PhD awarded: 01, Pursuing PhD: 04)
> ACADEMIC LINK	 1. Lab Homepage: https://www.mpplaboratory.com/ 2. ORCID: https://orcid.org/0000-0001-7490-190X 3. Academic Blog for students: https://letslearnplants.blogspot.com/?m=1

PUBLICATION JOURNAL PUBLICATION (1) Sahid S, Roy C, Shee D, Shee R, Datta R*, Paul S, 'ZFP37, C3H, NAC94, and (MAXIMUM TEN BEST PUBLICATION) bHLH148 transcription factors regulate cultivar-specific drought response by modulating r40C1 gene expression in rice. ', Environmental and Experimental Botany, October, 2023, 0098-8472 Shee R, Ghosh S, Khan P, Sahid S, Roy C, Shee D, Paul S, Datta R*, 'Glutathione (2) regulates transcriptional activation of iron transporters via S-nitrosylation of bHLH factors to modulate subcellular iron homoeostasis', Plant Cell & Environment, July, 2022, 1365-3040 Sahid S, Roy C, Shee D, Datta R*, Paul S, 'Jacalin domain containing protein OsSalT (3) interacts with OsDREB2A and OsNAC1 to impart drought stress tolerance in planta', Environmental and Experimental Botany, March, 2021, 0098-8472 Sahid S, Roy C, Paul S, Datta R*, 'Rice lectin protein r40c1 imparts drought (4) tolerance by modulating S-adenosylmethionine synthase 2, stressassociated protein 8 and chromatin-associated proteins.', Journal of Experimental Botan, December, 2020, 0022-0957 Datta R, Kumar D, Sultana A, Hazra S, Bhattacharyya D, Chattopadhyay S, (5) 'Glutathione regulates ACC synthase transcription via WRKY33 and ACC oxidase by modulating mRNA stability to induce ethylene synthesis during stress.', Plant Physiology, December, 2015, 0981-9428 Datta R, Mondal K, Boro P, Sultana A, Chattopadhyay S., 'Glutathione (6) imparts stress tolerance against Alternaria brassicicola infection via miRNA mediated gene regulation', Plant Signaling & Behavior, December, 2022, 1559-2324 (7) Datta R, Paul S., 'Long non-coding RNAs: Fine-tuning the developmental responses in plants.', Journal of Biosciences, September, 2019, 0250-5991 (8) Datta R*, Chattopadhyay S, 'Glutathione as a crucial modulator of phytohormone signaling during pathogen defense in plants.', Proceedings of the Indian National Science Academy, 2018, 0370-0046