



DOB: 18.01.1996
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RESEARCH AREAS

- Spot blotch of wheat
- Biochemical basis of disease resistance
- Molecular aspects of plant-pathogen interactions
- Fungal morphology
- Induced mutation

LANGUAGES

English | Hindi | Bengali

RESEARCH SKILLS

- Fungal isolation
- Poison food technique
- Pure culture
- Disease screening
- DNA extraction
- PCR
- Electrophoresis
- Gel documentation
- Phenol estimation
- Enzymatic activity assessment in plants

COMPUTER SKILLS

- MS Office
- Statistical Analysis
- Photoshop
- R software
- SPSS

Dr. Sunanda Chakraborty

Father's Name: Narayan Chakraborty

Mother's Name: Chhanda Chakraborty

OBJECTIVE

Awaiting an opportunity to utilize my abilities in academia which offer professional growth with great future opportunities, as well as to be a part of agricultural growth of our country.

PROFILE

Highly motivated, hard working, dedicated to work, with a passion for creativity and is flexible and possess excellent communication skills. Able to work well under pressure and achieve goals within stipulated time.

EDUCATION

2019- 2023	● Ph. D. Plant Pathology Bidhan Chandra Krishi Viswavidyalaya, Mohanpur Nadia, West Bengal, India	-
2017- 2019	● M.Sc. Plant Pathology Bidhan Chandra Krishi Viswavidyalaya, Mohanpur Nadia, West Bengal, India	8.71
2013- 2017	● B.Sc Agriculture (Hons.) College of Agriculture, Tripura	8.78
2013	● Higher Secondary Examination Hindi Higher Secondary School (CBSE), Agartala, Tripura	87.6 %
2011	● Madhyamik Examination Bhavan's Tripura Vidyamandir (CBSE), Narsingarh, Tripura	10

RESEARCH EXPERIENCE

Ph.D. (Ag.) Plant Pathology: **Characterization of spot blotch of wheat pathogen and defining their mechanism of resistance or susceptibility in wheat**

M.Sc. (Ag.) Dissertation Programme: **Biochemical basis of resistance to downy mildew disease in cucumber (*Cucumis sativus* L.)**

WORK EXPERIENCE

- Worked as JRF for the project “Induced mutation for resistance to spot blotch of wheat caused by *Bipolaris sorokiniana* (Shoem)” funded by Board of Research in Nuclear Sciences, Department of Atomic Energy (BRNS-DAE).
- Currently working as Assistant professor in the School of Smart Agriculture, ADAMAS University.

ACHIEVEMENTS/AWARDS

- Secured second position in Tripura state level debate competition in 2008.
- Qualified NET conducted by ASRB under the discipline Plant Pathology in 2020.
- Secured First position in Oral Presentation in Indian Phytopathological Society (IPS) East Zone virtual symposium held on January 19-20, 2021
- Awarded Best innovative book chapter award entitled “Arresting the arthropods: Insights into the role of entomopathogens in insect pest management” in book “Microbes: The destroyer and the game changer” by Clever fox Publishing, Chennai.

PUBLICATIONS

	Research /Review articles	Author position	NAAS	ISSN
1	Mondal A, Mahapatra S, Chakraborty S , Debnath D, Das T, Samanta M. Eco-friendly Management of Collar Rot of Lentil by Introduced Native Rhizobacterial Candidates. Indian Journal of Agricultural Research. 2021;1(8). https://doi.org/10.18805/IJARE.A-5861	3rd	5.20	0019-5022
2	Debsharma R, Islam S, Debnath D, Chakraborty S , Mahapatra S. Efficacy study of some botanical oils against spot blotch disease (<i>Bipolaris sorokiniana</i>) of wheat under in-vitro condition. International Journal of Chemical Studies. 2021;9(4):3022-8. doi: https://doi.org/10.22271/chemi.2021.v9.i1ap.11690	4th		2321-4902
3	Kumar S, Mahapatra S, Chakraborty S , Mukharjee S. Effect of abiotic stresses and mitigation strategy associated with their tolerance in wheat. Journal of Cereal Research 2021. 13 (1): 16-37. http://doi.org/10.25174/2582-2675/2021	3rd	5.05	2582-2675
4	Debnath D, Chakraborty S , Mahapatra S. Spot blotch: A journey from minor to major threat of wheat. Journal of Cereal Research. 2021;13(3). doi: 10.25174/2582-2675/2022/112851	2nd	5.05	2582-2675
5	Chakraborty S , Chattopadhyay A, Mandal AK. Screening of cucumber genotypes against downy mildew disease and its relationship with biochemical parameters. Indian Phytopathology. 2022 Apr 6:1-8.	1st	5.95	2248-9800

	https://doi.org/10.1007/s42360-022-00488-7			
6	Mahapatra S, Chakraborty S , Samanta M, Das S. Impacts of Integrated Nutrient Management on Epidemiology, Seed Yield and Severity of Alternaria blight Disease in Indian Mustard (<i>Brassica juncea</i> L.). International Journal of Bio-Resource & Stress Management. 2022 Mar 1;13(3). doi: https://doi.org/10.23910/1.2022.2540a	2nd	5.11	0976-4038.
7	Devi HM, Mahapatra S, Chakraborty S , Das S. Development of an economically viable and effective fungicide spray schedule for the management of spot blotch of wheat. Indian Phytopathology. 2022 May 6:1-6. https://doi.org/10.1007/s42360-022-00502-y	3rd	5.95	2248-9800
8	Vanlalhrauia, Mahapatra S, Chakraborty S , Das S. Prevalence of Southern Leaf Blight of Maize in two major maize producing states of India. Journal of Cereal Research. 2022 October 14(2):161-167. http://doi.org/10.25174/25822675/2022/123845	3rd	4.57	2582-2675
9	Alam SKH, Chakraborty S , Hooi A, Samanta M, Mahapatra S. Morpho-Molecular Identification of <i>Lasiodiplodia theobromae</i> Causing Leaf Blight of Orchid in India. National Academy Science Letters. 2023 May 22. https://doi.org/10.1007/s40009-023-01278-z	2nd	6.65	0250541X
10	Vanlalhrauia, Chakraborty S , Mahapatra S. Assessment of yield loss and avoidable yield loss due to southern leaf blight of maize and development of yield loss prediction model. Indian Phytopathology. 2023 Jun 4: 1-9. https://doi.org/10.1007/s42360-023-00651-8	2nd	5.95	2248-9800
11	Alam SKH, Mahapatra S, Chakraborty S , Hooi A, Bhushan BT. First report of <i>Curvularia geniculata</i> causing leaf spot in orchid in India. Indian Phytopathology. 2023 Jun 29:1-3. https://doi.org/10.1007/s42360-023-00650-9	3rd	5.95	2248-9800
12	Das T, Mahapatra S, Chakraborty S , Rayanoothala P, Thapa S, Umbrey Y, Mondal A. Morpho-molecular and Pathogenic Variability of Wilt of Lentil from Indo-Gangetic Plains of India. Legume Research-An International Journal. 2017: 1:9.	3rd	6.80	0976-0571
13	Chakraborty S , Mahapatra S, Hooi A, Ali N Md, Satdive R. Determination of Median Lethal (LD50) and Growth Reduction (GR50) Dose of Gamma Irradiation for Induced Mutation in Wheat. Brazilian Archives of Biology and Technology. 2023 Jul 17: 66:e23220294	1st	7.18	1678-4324

14	Mahapatra S, Chakraborty S , Kundu R, Kashyap PL. A rapid detached leaf assay for the phenotyping of spot blotch of wheat. <i>Vegetos</i> . 2023 September 4: https://doi.org/10.1007/s42535-023-00709-y	2nd	0.207 (Impact factor)	2229-4473
15	Hooi A, Mahapatra S, Chakraborty S , Mukherjee D, Maji A. Disease Scenario and Virulence Pattern of Major Wheat Pathogens Occurring in Indo-Gangetic Plains of West Bengal, India. <i>Indian Journal of Ecology</i> . 2023. 50(6): 2088-2095. https://doi.org/10.55362/IJE/2023/4180	3rd	5.79	0304-5250
16	Mahapatra S, Chakraborty S , Debnath D, Roy C. Insights into Wheat Blast: Its Epidemiology, Recent Advances and Management Strategies. <i>Gesunde Pflanzen</i> . 2023. 76:397-409. https://doi.org/10.1007/s10343-023-00964-8 .	2nd	3.1 (Impact factor)	1439-0345
17	Chakraborty S , Mahapatra S, Hooi A, Alam SKH, Kumar S, Kashyap PL. Insights into the influence of partial disease resistance components on host preference of <i>Bipolaris sorokiniana</i> in wheat. <i>Journal of Plant Pathology</i> . June 2024. 106: 1247-1258. https://doi.org/10.1007/s42161-024-01670-8	1st	2.2 (Impact factor)	2239-7264
18	Sharma D, Mahapatra S, Chakraborty S , Dutta S, Mukherjee D. Effect of different tillage systems on disease dynamics of spot blotch of wheat. <i>Vegetos</i> . https://doi.org/10.1007/s42535-024-01101-0	3rd	0.207 (Impact factor)	2229-4473
19	Chakraborty S , Mahapatra S, Hooi A, Bhushan BT, Almansour MI, Ansari MJ, Hossain A. Survey, isolation and characterisation of <i>Bipolaris sorokiniana</i> (Shoem.) causing spot blotch disease in wheat under the climatic conditions of the Indo–Gangetic plains of India. <i>Heliyon</i> . 10 (22): e40398. https://doi.org/10.1016/j.heliyon.2024.e40398	1st	10.00	2405-8440

Book chapters		Author position	ISBN
1	Debnath, D., Chakraborty, S. , Deb, G. (2020). Sustainable Farming: The Oldest but Smartest Soldier against Hardest Enemy; The Soil Pathogens. In: Singh, H. K. (ed) <i>Current Research and Innovations in Plant Pathology</i> . AkiNik Publishers, New Delhi.	2nd	978-93-90541-33-1

2	Chakraborty, S., Debnath, D., Mahapatra, S., Das, S. (2021). Role of Endophytes in Plant Disease Management. In: Singh, K.P., Jahagirdar, S., Sarma, B.K. (eds) Emerging Trends in Plant Pathology. Springer, Singapore. https://doi.org/10.1007/978-981-15-6275-4_19	1st	978-981-15-6275-4
3	Chakraborty, S., Sudhir Kumar, Satish Kumar and Sunita Mahapatra (2021). Fungal foes: Precision phenotyping for better management of fungi borne wheat diseases, In. SK Bisnoi, Hanif Khan, SK Singh and GP Singh (eds) Breeding Frontiers in Wheat. M/S Agrobiose.	1st	978-81-949237-5-6
4	Mahapatra, S., Chakraborty, S., Rayanoothala, P., Das, S., Bishnoi, S.K., Kumar, S. (2022). Antimicrobial Agents for Wheat Disease Management: Mode of Action and Its Application. In: Kashyap PL, <i>et al.</i> New Horizons in Wheat and Barley Research. Springer, Singapore. https://doi.org/10.1007/978-981-16-4134-3_6	2nd	2582-2675
5	Mahapatra, S., Chakraborty, S., Samanta, M., Das, S., Tofazzal, I. (2022). Current Understanding and Future Directions of Biocontrol of Plant Diseases by <i>Bacillus spp.</i> , with Special Reference to Induced Systemic Resistance. In: Islam, M.T., Rahman, M., Pandey, P. (eds) Bacilli in Agrobiotechnology. Bacilli in Climate Resilient Agriculture and Bioprospecting. Springer, Cham. https://doi.org/10.1007/978-3-030-85465-2_6	2nd	978-3-030-85465-2
6	Chakraborty, S., Islam, T., Mahapatra, S. (2022). Antifungal Compounds of Plant Growth-Promoting <i>Bacillus</i> Species. In: Sayyed, R., Singh, A., Ilyas, N. (eds) Antifungal Metabolites of Rhizobacteria for Sustainable Agriculture. Fungal Biology. Springer, Cham. https://doi.org/10.1007/978-3-031-04805-0_7	1st	978-3-031-04805-0
7	Chakraborty, S., Hooi, A. (2023). Arresting the arthropods: Insights into the role of entomopathogens in insect pest management. In: Debnath, D., Labanya, R., Mohapatra, C. (eds) Microbes: The destroyer and game changer. Clever Fox Publishing Chennai, India.	1st	978-93-94457-81-2
8	Chakraborty, S., Hooi, A., Mahapatra, S. (2024). Amelioration of biotic stress by using rhizobacteria: Sustainable Crop Production. In: Parray, J. A., Shameem, N., Egamberdieva, D. (eds) Microbiome Drivers of Ecosystem Function. Academic Press, Elsevier. https://doi.org/10.1016/B978-0-443-19121-3.00006-5	1st	978-04-43223-98-3

9	Chakraborty, S. (2024). Nanotechnology in Fruit Crop Disease Detection and Control. In: Sharma, S. K., Kumar, M., Kumar, D., Tomar, D. S. (eds) Technology Based Strategies in Fruit Crop Disease Management. Elite Publishing House.	1st	978-93-58990-63-8
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Popular article		Author position	ISSN
1	Chakraborty, S., Hooi, A., Alam S.K.H., Bhushan B.T., Mahapatra, S. Trichoderma: A Multifaceted Solution towards Sustainable Agriculture. The Agriculture Magazine. 2023 February. 2(4):202-205	1 st	2583-1755
2	Chakraborty, S. Stacked for Success: Vertical Farming for Sustainable Cities. Agri Articles, 04(05): 1117-1119	1st	2582-9882

SEMINARS/CONFERENCES ATTENDED

1. 1st International Symposium on “Cereals for Food Security and Climate Resilience” held online during January 18-20, 2022.
2. 21 days International training cum Workshop programme organized by AEEFWS (Agro Environmental Education and Farmers Welfare Society, Punjab) held online during 30th April to 20th May, 2022.
3. Current and Future Agriculture with genome editing held online on 19th September, 2021
4. International Seminar on “Agriskills for convergence in Research, Industry and Livelihood (ACRIL)” held at Farmers’ Academy and Convention Centre, BCKV, Kalyani, Nadia, West Bengal on 28th November to 1st December 2019
5. National Symposium (Virtual) on “Robust plant protection strategies for sustainable agriculture” held at ICAR- National Rice Research Institute, Cuttack, Odisha during January 19-20, 2021
6. National Webinar on “Emerging Technologies in Plant Protection : Detection, Diagnosis and Diminution” held on 9th May, 2022 organized by Faculty of Agriculture, Sri Sri University, Cuttack, Odisha
- 7.

PRESENTATION (ORAL/POSTER)

1. Chakraborty S, Mandal AK, Chattopadhyay A (2019) Biochemical basis of resistance to downy mildew disease in cucumber (*Cucumis sativus* L.). International Seminar

on “Agriskills for convergence in Research, Industry and Livelihood (ACRIL)” held at Farmers’ Academy and Convention Centre, BCKV, Kalyani, Nadia, West Bengal on 28th November to 1st December 2019

Presentation: Poster

2. Kundu R, Chakraborty S, Das S, Mahapatra S (2021) Development of a rapid leaf detached assay for the phenotyping of spot blotch of wheat. National Symposium (Virtual) on “Robust plant protection strategies for sustainable agriculture” held at ICAR- National Rice Research Institute, Cuttack, Odisha during January 19-20, 2021

Presentation: Oral

3. Chakraborty S, Mahapatra S, Devi HM, Das S (2022) Development of an economically viable and effective fungicide spray schedule for the management of spot blotch of wheat. 1st International Symposium on “Cereals for Food Security and Climate Resilience” held online during January 18-20, 2022.

Presentation: Poster

4. Mahapatra S, Chakraborty S (2022) Integrated Nutrient management in Indian Mustard (*Brassica juncea* (Linn.) Czern. and Coss.): Its impact on Epidemiology, Seed Yield and Severity of *Alternaria blight* disease. IPS Eastern Zone Meet cum National symposium on Role of Plant pathology in Global Environment and Food security, held at Farmers’ Academy and Convention Centre, BCKV, Kalyani, Nadia, West Bengal on 6-7 March, 2022

Presentation: Oral

5. Chakraborty S, Mahapatra S (2023) Effects of gamma radiation on growth, yield attributes and biotic stress tolerance in wheat. International Conference on Biotic and Abiotic Stress of Crop Plants and their Sustainable Management held in the Department of Plant Pathology, Visva-Bharati, West Bengal during February 02-03, 2023.

Presentation: Oral

6. Chakraborty S (2024) Insights into the influence of partial resistance components on spot blotch disease development in wheat. National Conference on Plant Health for Food Security: Threats and Promises, organized by Indian Phytopathological Society, New Delhi, during February 01-03, 2024.

Presentation: Oral

REFERENCES

1. **Dr. Sunita Mahapatra**, Assistant Professor (Stage.II), Department of Plant Pathology, SSMP, Bidhan Chandra Krishi Viswavidyalaya, Mohanpur, Nadia, W.B. 741252. Mobile No. 9432162326/8697510002, email id. sunitamahapatra@yahoo.co.in
2. **Prof. Srikanta Das**, Professor, Department of Plant Pathology, SSMP, Bidhan Chandra Krishi Viswavidyalaya, Mohanpur, Nadia, W.B. 741252. Ph. 9433285115 email id. sridas_bckv@rediffmail.com

DECLARATION

I hereby declare that all the details furnished by me up to now are true to the best of my knowledge and I bear the responsibility for the correctness of above mentioned particulars.

Sunanda Chakraborty
(Sunanda Chakraborty)