

Personal Profile / Curriculum Vitae

Dr. RANJAN GHOSH
Assistant Professor

Address

- i) Address for Communication:** Department of Botany
Bankura Sammilani College
P.O.-Kenduadihi; Dist-Bankura
PIN-722102, West Bengal
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Personal Details

- Contact Number:** 9851248513/ 7908174770
- Email Id:** vbranjan@gmail.com
- Date of Birth:** 24.03.1987
- Date of Joining:** 03.09.2019
- Web Page Link (if any):** www.researchgate.net/profile/Ranjan_Ghosh6
[RANJAN GHOSH - Google Scholar](https://scholar.google.com/citations?user=...)

Educational Qualification

- M.Sc.:** Department of Botany; Visva-Bharati, 2009
- Ph.D.:** Department of Botany; Visva-Bharati, 2016

Post-Doctorate Experience (if any): NA

Area of Teaching: Botany (Mycology and Phytopathology; Microbiology; Reproductive Biology; Economic Botany, Plant Biotechnology and others)

Research Interest:

- Mechanism of phosphate solubilizing by *Burkholderia* spp.
- Plant Growth Promoting (PGP) attributes of rhizobacteria.
- Biological control of plant pathogenic fungi.
- Production of bioactive metabolites from plant endophytic fungi.
- Bacteriocin production and antifungal properties of Lactic Acid Bacteria (LAB).
- Antimicrobial and antifungal potential of natural products.

Awards and Fellowships:

1. Award of INSPIRE Fellowship (for pursuing Ph.D.) provided by Department of Science and Technology (DST), India, 2011.
2. Award of best poster presentation in UGC sponsored National Seminar provided by Bankura Christian College, 2011.
3. Outstanding Paper Award at Regional Science and Technology Congress, 2016 provided by Department of Science and Technology (DST), Govt. of West Bengal, 2016.
4. Award for 2nd position in poster presentation at 3rd Regional Science and Technology Congress, 2018 provided by Department of Science and Technology (DST), Govt. of West Bengal, 2018.

Research Project: NA**Ph.D. / M. Phil. Thesis Guidance:** NA

Student's Name	Thesis Title	Registration Year	Institution / University

Member of Personal Body / Editorial Board: NA**Faculty Development Courses / Programs attended:** NA

Name of the Course / Program	Venue	Duration
UGC-Sponsored Faculty Induction Programme	HRDC, Mizorum University	06.07.2021 – 26.07.2021 (21 days)
UGC-Sponsored Refresher Course in Environment Science	HRDC, Burdwan University	20.08.2022- 02.09.2022 (14 days)

National / International Publications:

1. Gorai, P.S., **Ghosh, R.**, Ghosh, S., Samanta, S., Sen, A., Panja, S., Gond, S.K., Mandal N.C., 2023. Management of Black Root Disease-Causing Fungus *Fusarium solani* CRP1 by Endophytic *Bacillus siamensis* CNE6 through Its Metabolites and Activation of Plant Defense Genes. *Microbiology Spectrum*. 6;11(2): e0308222. doi: 10.1128/spectrum.03082-22.
2. Gorai, P.S., **Ghosh, R.**, Mandal, S., Ghosh, S., Chatterjee, S., Gond, S.K., Mandal, N.C., 2021. *Bacillus siamensis* CNE6- a multifaceted plant growth promoting endophyte of *Cicer arietinum* L. having broad spectrum antifungal activities and host colonizing potential. *Microbiological Research*. 252 (2021):126859. <https://doi.org/10.1016/j.micres.2021.126859>.
3. Gorai, P.S., **Ghosh, R.**, Konra, S., Mandal, N.C., 2021. Biological control of early blight disease of potato caused by *Alternaria alternata* EBP3 by an endophytic bacterial strain *Bacillus velezensis* SEB1. *Biological Control*. 156:104551. <https://doi.org/10.1016/j.biocontrol.2021.104551>.

4. Chatterjee, S., **Ghosh, R.**, Mandal, N.C., 2020. Inhibition of biofilm-and hyphal-development, two virulent features of *Candida albicans* by secondary metabolites of an endophytic fungus *Alternaria tenuissima* having broad spectrum antifungal potential. *Microbiological Research*. 232:126386. <https://doi.org/10.1016/j.micres.2019.126386>.
5. **Ghosh, R.**, Barman, S., Mandal, N.C., 2019. Phosphate deficiency induced biofilm formation of *Burkholderia* on insoluble phosphate granules plays a pivotal role for maximum release of soluble phosphate. *Scientific Reports*. 9: 5477. <https://doi.org/10.1038/s41598-019-41726-9>
6. Chatterjee, S., **Ghosh, R.**, Mandal, N.C., 2019. Production of bioactive compounds with bactericidal and antioxidant potential by endophytic fungus *Alternaria alternata* AE1 isolated from *Azadirachta indica* A. Juss. *PLoS ONE*. 14(4): e0214744. <https://doi.org/10.1371/journal.pone.0214744>
7. Barman, S., **Ghosh, R.**, Mandal, N.C., 2018. Production optimization of broad spectrum bacteriocin of three strains of *Lactococcus lactis* isolated from homemade buttermilk. *Annals of Agrarian Science*. 16: 286-296. <https://doi.org/10.1016/j.aasci.2018.05.004>
8. **Ghosh, R.**, Barman, S., Pavan Kumar J.G.S., Mandal, N.C., 2018. Biological activities of *Alternaria* sp. RL4- a potent endophytic fungus associated with *Rauvolfia serpentina* L. Benth. *Asian Journal of Pharceutical and Clinical Research*. 11(11): 178-182. <https://doi.org/10.22159/ajpcr.2018.v11i11.27500>
9. Garai, S., **Ghosh, R.**, Bandopadhyay P.P., Mandal, N.C., Chattopadhyay, A., 2018. Anti-microbial and Anti-cancer Properties of Echinocytic Acid Extracted from *Luffa cylindrica* L. *Journal of Food Processing and Technology*. 9(2): 1000717. <https://doi.org/10.4172/2157-7110.1000717>
10. Barman, S., **Ghosh, R.**, Sengupta, S., Mandal, N.C., 2017. Longterm storage of post-packaged bread by controlling spoilage pathogens using *Lactobacillus fermentum* C14 isolated from homemade curd. *PLoS ONE*. 12(8): e0184020. <https://doi.org/10.1371/journal.pone.0184020>
11. Barman, S., **Ghosh, R.**, Dalal, D., Mandal, N.C., 2017. Suppression of leaf blight of *Ocimum sanctum* L. using lactic acid bacteria as novel bio-control agent. *Proceedings of National Academy of Sciences: India Section B*. 88(4): 1389-1397. <https://doi.org/10.1007/s40011-017-0873-9>
12. **Ghosh, R.**, Barman, S., Khatun, J., Mandal, N.C., 2016. Biological control of *Alternaria alternata* causing leaf spot disease of *Aloe vera* using two strains of rhizobacteria. *Biological Control*. 97: 102-108. <https://doi.org/10.1016/j.biocontrol.2016.03.001>
13. **Ghosh, R.**, Barman, S., Mukherjee, R., Mandal, N.C., 2016. Role of phosphate solubilizing *Burkholderia* spp. for successful colonization and growth promotion of *Lycopodium cernuum* L. (Lycopodiaceae) in lateritic belt of Birbhum district of West Bengal, India. *Microbiological Research*. 183: 80-91. <https://doi.org/10.1016/j.micres.2015.11.011>
14. **Ghosh, R.**, Barman, S., Mukhopadhyay, A., Mandal, N.C., 2015. Biological control of fruit-rot of jackfruit by rhizobacteria and food grade lactic acid bacteria. *Biological Control*. 83: 29-36. <https://doi.org/10.1016/j.biocontrol.2014.12.020>
15. Brahmachari, G., Sarkar, S., **Ghosh, R.**, Barman, S., Mandal, N.C., Jash, S.K., Banerjee, B., Roy, R., 2014. Sunlight-induced rapid and efficient biogenic synthesis of silver

- nanoparticles using aqueous leaf extract of *Ocimum sanctum* Linn. with enhanced antibacterial activity. *Organic and Medicinal Chemistry Letters*. 4(1): 18. <https://doi.org/10.1186/s13588-014-0018-6>
16. Barman, S., **Ghosh, R.**, Mandal, N.C., 2014. Use of Bacteriocin Producing *Lactococcus lactis* subsp. *lactis* LABW4 to Prevent *Listeria monocytogenes* Induced Spoilage of Meat. *Food and Nutrition Sciences*. 05(22), 2115-2123. <https://doi.org/10.4236/fns.2014.522224>
 17. Bhattacharya, S.S., Barman, S.S., **Ghosh, R.**, Duary, R.K., Goswami, L., Mandal, N.C., 2013. Phosphate solubilizing ability of *Emericella nidulans* strain V1 isolated from vermicompost. *Indian Journal of Experimental Biology*. 51(10): 840-848.
 18. Brahmachari, G., Mandal, N.C., Roy, R., **Ghosh, R.**, Barman, S., Sarkar, S., Jash, S.K., Mondal, S., 2013. A new pentacyclic triterpene with potent antibacterial activity from *Limnophila indica* Linn. (Druce). *Fitoterapia*. 90: 104-111. <https://doi.org/10.1016/j.fitote.2013.07.012>
 19. Roy, S., Acharya, R., Mandal, N.C., Barman, S., **Ghosh, R.**, Roy, R., 2012. A comparative antibacterial evaluation of raw and processed Guja (*Abrus precatorius* Linn.) seeds. *Ancient Science of Life*. 32(1): 20-23. <https://doi.org/10.4103/0257-7941.113794>
 20. Barman, S., Chakrabarti, H.S., **Ghosh, R.**, Mandal, N.C., 2011. Assessment of Antimicrobial Activity from *Saxifraga ligulata*. *Phytomorphology*. 61(1& 2): 36-41.
 21. **Ghosh, R.**, Pal, R., Mukhopadhyay, A., Mandal, N.C., 2011. Phosphate solubilizing ability of some root nodule bacteria. *Wesleyan Journal of Research*. 4(2): 88-96.

List of Books / Book Chapters Published:

1. **Ghosh, R.**, Mandal, N.C., 2022. Quorum sensing in rhizosphere engineering. In: Dubey, C.R., Kumar, P., editors. *Rhizosphere Engineering*, ISBN: 978-0-323-89973-4. USA: Academic Press (Elsevier). pp. 355-381.
2. **Ghosh, R.**, Chatterjee S., Mandal, N.C., 2020 *Stenotrophomonas*. In: Amaresan, N., Kumar, M.S., Annapurna, K., Kumar, K., Sankaranarayanan, editors. *Beneficial Microbes in Agro-Ecology*, ISBN: 9780128172308. USA: Academic Press (Elsevier). pp. 427-442.
3. **Ghosh, R.** and Mandal, N.C., 2020. Use of plant growth-promoting *Burkholderia* species with rock phosphate-solubilizing potential toward crop improvement. In: Singh, J.S., Vimal, S.R., *Microbial services in restoration ecology*, ISBN: 978-0-12-819978-7. Elsevier. pp. 139-156.
4. **Ghosh, R.**, Mandal, N.C., Yeast as a cell factory. In: Bose, D., Roy, S., editors. *Biology of Plants and Microbes*, ISBN: 978-93-80663-63-0. India (Kolkata): Levant Books. 2012. p 188-200.

National / International seminars / conferences / workshop attended/ Paper presented:

Sl No	Name of Seminar / Workshop / Symposium	Venue	Duration	State National / International	Nature of Participation
1.	National symposium on “Plant Diversity and Resources: Evolution, Analyses, Stress and Challenges and Palaeophytodiversity: Its Aspects and Prospects”	Department of Botany, Centre of Advanced Study, University of Calcutta	20 th - 22 nd December, 2011.	National	Oral presentation
2.	National Seminar on “Contemporary Progress in Plant Sciences”	Department of Botany, The University of Burdwan	20 th - 21 st March, 2015.	National	Oral presentation
3.	“1 st Regional Science & Technology Congress-2016”	Bankura Christian College	7 th -8 th November, 2016.	State	Oral presentation
4.	24 th West Bengal State Science and Technology Congress, 2017	Science City, Kolkata	28 th February-1 st March, 2017.	State	Oral presentation
5.	National Seminar on “Plant and Microbial Resources: Utilization and Conservation”	Department of Botany, Visva-Bharati	15 th -16 th March, 2017.	National	Oral presentation
6.	ISMPP Zonal Meet (East Zone) and National Seminar on “Impact of Changing Environment on Plants, Microbes and their Interactions”	Department of Botany, Visva-Bharati	13 th -14 th September, 2017.	National	Oral presentation
7.	One Day International Seminar on “Emerging Trends in Biological Sciences”	Department of Botany, Suri Vidyasagar College	8 th November, 2022	International	Oral presentation
8.	National Seminar on Plant and its Eco-system Services	Department of Botany, Sonamukhi College	5 th -6 th June, 2023	National	Oral presentation
9.	MBSI Sponsored International Seminar on “Microbes and Social Equity (ISMS-2023)”	Department of Microbiology, Bankura Sammilani College	22 nd -23 rd December, 2023	International	Oral presentation
10.	International Conference on “Chemistry at the Frontier”	Department of Chemistry, Bankura Sammilani College	10 th February, 2024	International	Oral presentation
11.	SERB (ANRF) sponsored One Day International Seminar on “Scientific Advances and Challenges Against Cancer & Infectious Diseases”	Chandidas Mahavidyalaya	16 th July, 2024	International	Oral presentation

12.	UGC Sponsored National Seminar on “Exploitation of Biofertilizers and Biopesticides for Sustainable Development of Modern Agriculture”	Bankura Christian College	18 th - 19 th February, 2011.	National	Poster presentation
13.	UGC Sponsored National Seminar on “Recent advances in Microbial Biotechnology”,	Kabi Nazrul College, W.B.	10 th - 11 th January, 2012.	National	Poster presentation
14.	53 rd Annual Conference of Association of Microbiologists of India (AMI) on “Microbial World: Recent Innovations and Future Trends”,	KIIT University, Bhubaneswar	22 nd - 25 th November, 2012.	International	Poster presentation
15.	100 th Indian Science Congress Association	University of Calcutta, Kolkata	3 rd -7 th January, 2013.	National	Poster presentation
16.	DST Sponsored National Seminar on “New Horizons in Biotechnology”	Haldia Institute of Technology	30 th - 31 st August, 2013.	National	Poster presentation
17.	5 th Indian Youth Science Congress	Visva-Bharati, Santiniketan	6 th - 9 th December, 2013.	National	Poster presentation
18.	National Conference on “Frontier Area of Research and Applications Using Electron Microscopy”	Visva-Bharati, Santiniketan	16 th March, 2018.	National	Poster presentation
19.	3 rd Regional Science and Technology Congress (Western Region), 2018	Sidho-kanho-Birsha University, Purulia,	20 th -21 st December, 2018.	State	Poster presentation
20.	UGC Sponsored Workshop & Extension Programme on “Mushroom Culture & Processing”	Department of Botany, Visva-Bharati	18 th November - 19 th December, 2011	National	Workshop
21.	UGC Sponsored Workshop & Extension Programme on “Medicinal Plants- Biodiversity, Sustainable Utilization and Cultivation”	Department of Botany, Visva-Bharati	14 th - 15 th January, 2012.	National	Workshop
22.	UGC Sponsored Workshop & Extension Programme on “Biofertilizer and its Applications”	Department of Botany, Visva-Bharati	11 th - 12 th March, 2012.	National	Workshop
23.	ICMR sponsored “Workshop and Hands-on-training on plant DNA Fingerprinting”	Bose Institute, Kolkata	20 th September - 4 th October, 2012.	National	Workshop

24	“National Workshop on Scanning Electron Microscopy”	USIC, University of Burdwan	26th – 29 th August, 2014.	National	Workshop
25	One Day State Level Seminar on the theme “Our Ice, Our Future”	Ramananda Auditorium, Bankura Sammilani College	6 th June, 2024	State Level	Participation

Other Notable Activities:

1. Qualified West Bengal State Eligibility Test (WBSET-2017) in the year 2018.
2. Qualified GATE in the year 2014.
3. Worked as a Guest Teacher in the Department of Botany, Visva-Bharati from 26th August, 2016 to 26th February, 2019.
4. Worked as an Assistant Teacher from 1st March 2019 to 2nd September, 2019 in a Govt. sponsored school.
5. Worked as Head of the Department of Department of Botany, Bankura Sammilani College from 6th May, 2022 to 14th May, 2024.
6. Working as Nodal Officer (BSC) for Academic Bank of Credits, Bankura University.
7. Working as Nodal Officer (BSC) for Internship under New Curriculum and Credit Framework for Undergraduate Programme as per NEP-2020.
8. Worked as Convenor of Seminar and Quiz Committee during Platinum Jubilee Celebration of Bankura Sammilani College.