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Designation:

Assistant Professor, Department of Biotechnology,

Qualification: M.Sc. Ph.D.

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BRIEF BIOGRAPHY (in 200 words)

AREA OF INTEREST:

COURSES TAUGHT:

TEACHING EXPERIENCE: 07 Years

RESEARCH EXPERIENCE: 11 Years

ADMINISTRATIVE/EXECUTIVE EXPERIENCE: 07 Years

AWARDS & HONORS:

RESEARCH GUIDANCE:

RESEARCH GRANTS:

PUBLICATIONS:

JOURNAL PUBLICATIONS: 67

1. Bhadra, P., Maitra, S., & Shankar, T. (2022). Molecular investigation of plant-environment interaction at functional level. In *Plant Perspectives to Global Climate Changes* (pp. 63-78). Academic Press.

2. Maitra, S.; Brestic, M.; Bhadra, P.; Shankar, T.; Praharaj, S.; Palai, J.B.; Shah, M.M.R.; Berek, V.; Ondrisik, P.; Skalický, M.; et al. Bioinoculants—Natural Biological Resources for Sustainable Plant Production. *Microorganisms* 2022, 10, 51. <https://doi.org/10.3390/microorganisms10010051>

3. Maitra, S., Brestic, M., Bhadra, P., Shankar, T., Praharaj, S., Palai, J. B., Shah, M. M. R., et al. (2021). Bioinoculants—Natural Biological Resources for Sustainable Plant Production.

Microorganisms, 10(1), 51. MDPI AG. Retrieved from
<http://dx.doi.org/10.3390/microorganisms10010051>

4. Praharaj S, Skalicky M, Maitra S, **Bhadra P**, Shankar T, Brestic M, Hejnak V, Vachova P, Hossain A. Zinc Biofortification in Food Crops Could Alleviate the Zinc Malnutrition in Human Health. *Molecules*. 2021; 26(12):3509. <https://doi.org/10.3390/molecules26123509>

5. Intercropping—A Low Input Agricultural Strategy for Food and Environmental Security. Sagar Maitra, Akbar Hossain, Marian Brestic, Milan Skalicky, Peter Ondrisik, Harun Gitari, Koushik Brahmachari, Tanmoy Shankar, **Preetha Bhadra**, Jnana Bharati Palai, Jagadish Jena, Urjashi Bhattacharya, Sarath Kumar Duvvada, Sagar Lalichetti, Masina Sairam. *Agronomy*, 11(2), 343

6. β -glucan: An Immunostimulant in Aquaculture Studies Adyasha Parida¹, Preetha Bhadra^{2*} and Pradipta Banerjee³. *Indian Journal of Natural Sciences*, Vol.12, Issue 67, August, 2021

7. Functional Food as an Immuno-Modulator, Vadditandra Bhavani¹, Pradipta Banerjee^{2*} and Preetha Bhadra, *Indian Journal of Natural Sciences*, *Natural Sciences*, Vol.12, Issue 67, 33192, August 2021

8. Marine Immune Booster: Seaweeds and Corals, Harshita Singh¹, Pradipta Banerjee^{2*} and Preetha Bhadra³, *Indian Journal of Natural Sciences*, Vol.12, Issue 67, 33278, August, 2021

9. Spirulina as an Immune Booster for Fishes, Khumbar Debbarma¹, Pradipta Banerjee^{2*} and Preetha Bhadra³, *Indian Journal of Natural Sciences*, Vol.12, Issue 67, 33237, August 2021

10. Hossain A, Skalicky M, Brestic M, Maitra S, Ashraful Alam M, Syed MA, Hossain J, Sarkar S, Saha S, **Bhadra P**, Shankar T, Bhatt R, Kumar Chaki A, EL Sabagh A, Islam T. Consequences and Mitigation Strategies of Abiotic Stresses in Wheat (*Triticum aestivum* L.) under the Changing Climate. *Agronomy*. 2021; 11(2):241.
<https://doi.org/10.3390/agronomy11020241>

11. Maitra, S., **Bhadra, P.**, Yadav, A. N., Palai, J. B., Jena, J., & Shankar, T. (2021). The Omics Strategies for Abiotic Stress Responses and Microbe-Mediated Mitigation in Plants. In *Soil Microbiomes for Sustainable Agriculture* (pp. 315-377). Springer, Cham.

12. A Review On Extraction Of Phylloquinone From Kiwi Fruit (*Actinidia Deliciosa*) as a Blood Coagulation Supplement (2020), **Preetha Bhadra**, Ankit Kumar Rath, *Pradipta Banerjee, Akanksha Rout Biosc.Biotech.Res.Comm (DOI: <http://dx.doi.org/10.21786/bbrc/13.3/20>) 13 (4)
13. NiO and NiO@SiO Nanoparticles In And As Anti-Microbial And Anti Cancerous Drug. Journal of microbiology, biotechnology and food sciences (2020). **Preetha Bhadra**, Biplab Dutta, Debapriyo Bhattacharya, Sampad Mukherjee.
14. Optical Nanofiber: A Smart Detector of Mycotoxins in Blood (2019). Journal of microbiology, biotechnology and food sciences. **Preetha Bhadra**, Biplab Dutta, Debapriyo Bhattacharya, Sampad Mukherjee.
15. On the reduction of health hazards caused by modified genes in indigenous rice plant varieties. Bioscience Biotechnology Research Communication (2018). **Preetha Bhadra*** and Atanu Deb.
16. Antifungal peptides: Biosynthesis, production and applications. Bioscience Biotechnology Research Communication (2018). NF Mirza, S Motamarry, **P Bhadra**, B Mishra.
17. A noble process of production of bio plastic (degradable) from waste plastic (nondegradable) (2018). Journal of Emerging Technologies and Innovative Research. Monali Parida, Victor Pradhan, Biswambhar Mishra, **Preetha Bhadra***
18. A Noble and Innovative Solution to Blood Storage. Journal of Emerging Technologies and Innovative Research. Yashwobanto Kar, Saswati Das, Biswambhar Mishra, **Preetha Bhadra***.
19. Determining The Effect of Aflatoxin B1 Using Hemoglobin of Human Blood as Interacting Medium by Calculation of Collision Energy. International Journal of Advance Research. **Preetha Bhadra**, Chitrangada Das Mukhopadhyay, Sampad Mukherjee
20. Pradipta Banerjee, Preetha Bhadra (2020). Formulation of Anti-microbial and Anti-aging Oil from Natural Resources for Topical Application. *International Journal of Botany Studies*, 5 (3): 279-284

21. Pradipta Banerjee, Preetha Bhadra (2020): Mini-Review on Strigolactones: Newly Discovered Plant Hormones. *Bioresource Biotechnology Research Communications*. 13 (3) (Accepted in JulySeptember issue).
22. Preetha Bhadra. (2020), In Silico analysis of the Long pepper as targeted therapy for Targeted Disease Tomato Yellow Leaf Curl *Indian Journal of Natural Sciences*.10(60):22914-22923
23. Preetha Bhadra. (2020), In Silico analysis of the Long pepper as targeted therapy for Targeted Animal Disease Cholera, *Indian Journal of Natural Sciences*. 10(60):22923-22931
24. Preetha Bhadra. (2020), In Silico analysis of the Rosemary as targeted therapy for Targeted Animal Disease Nephritis. *Indian Journal of Natural Sciences*.10(60):22932-22942
25. Preetha Bhadra. (2020), In Silico analysis of the Rosemary as targeted therapy for Targeted Plant Disease-Causing Microbial Disease Black gram and green gram. *Indian Journal of Natural Sciences*. 10(60): 22942-22951
26. Preetha Bhadra. (2020) In Silico analysis of the Green Chiretta (*Andrographis paniculata*) as targeted therapy for Targeted Plant Disease-Causing Microbial Disease Chocolate Spot. *Indian Journal of Natural Sciences*. 10(60):22951-22959
27. Preetha Bhadra. (2020), A Review on Chemical Constituents and Pharmacological studies of *Coriandrum sativum L*. *Indian Journal of Natural Sciences*. 10(60):22959-22965
28. Preetha Bhadra, Atanu Deb. (2020), A Review Study On Acne Caused By *Propionibacterium*. *Indian Journal of Natural Sciences* .10(59):18422-182435
29. Preetha Bhadra, Atanu Deb. (2020), Review On The Treatment Of Urinary Tract Infection Without The Use Of Antibiotics. *Indian Journal of Natural Sciences*.10(59):18394-18406
30. Preetha Bhadra, Atanu Deb. (2020), Sleeplessness As A Marker Of Anaemia: A Review. *Indian Journal of Natural Sciences*.10(59):18201-182010

31. Preetha Bhadra, Atanu Deb. (2020), Review On Diabetic Foods And UTI. *Indian Journal of Natural Sciences*. 10(59): 18377-18383
32. Preetha Bhadra, Atanu Deb. (2020), A Literature Review On acne Due To Hormonal Changes And Lifestyle. *Indian Journal of Natural Sciences*.10(59):18507-18521
33. Preetha Bhadra. (2020), An Overview Of Ajwain (*Trachyspermum ammi*). *Indian Journal of Natural Sciences* .10(59):18466-182474
34. Preetha Bhadra, Atanu Deb. (2020). A Review On Nutritional Anemia. *Indian Journal of Natural Sciences* .10(59):18466-18474
35. Preetha Bhadra. (2019). ZnO And ZnO@SiO₂: A Noble Therapeutic Drug For Cancer And Microbial Contamination. *Bioscience Biotechnology Research Communications*.12(3):798-808
36. Preetha Bhadra. (2020). Exploring Inhibitory Potential Of Ginger Against Numerous Targets Of Diverse Forms Of Cancer A Review. *Indian Journal of Natural Sciences*,10(60):20861- 20865
37. Preetha Bhadra, Atanu Deb. (2020) Targeted Therapy for Cancer in Women. *Indian Journal of Natural Sciences*. 10(60):20609-20616
38. Preetha Bhadra. (2020) An In silico Analysis of the Peppermint as Bio-Pesticide (No Side Effect). *Indian Journal of Natural Sciences* .10(60):20617-20625
39. Preetha Bhadra. (2020), Cinnamon: In silico Analysis as Targeted Bio- Pesticides. *Indian Journal of Natural Sciences*.10(60):20626-20634
40. Preetha Bhadra. (2020), An In silico Analysis of the Peppermint as Therapy for Typhoid. *Indian Journal of Natural Sciences*.10(60):20635-20644
41. Preetha Bhadra. (2020), Cumin: In silico Analysis as of Targeted Therapy for Diarrhoea. *Indian Journal of Natural Sciences* .10(60):20653-20661
42. Preetha Bhadra. (2020), In silico Analysis of the Cumin as Targeted Biopesticides. *Indian Journal of Natural Sciences*.10(60):20670-20678

43. Preetha Bhadra. (2020) Cinnamon: In silico Analysis targeted Therapy for Gastric Cancer. *Indian Journal of Natural Sciences*. 10(60):20662-20669
44. Preetha Bhadra. (2020), In silico Analysis of the Ashwagandha as Targeted Therapy for Oral Cancer. *Indian Journal of Natural Sciences*. 10(60):20679-20687
45. Preetha Bhadra. (2020), In-silico Analysis of Compounds Characterized from *Murrayakoenigii* against Cancer. *Indian Journal of Natural Sciences*. 10(60): 20861-20865

46. Can you please provide me with access to this document? Preetha Bhadra. (2020), In-Silico Analysis of Inhibitory Action of Garlic against Hyperlipidemia by FAS Enzyme. *Indian Journal of Natural Sciences*.10(60): 20786-2079
47. Preetha Bhadra. (2020), In-silico Analysis of Effects of Ajwain Extract on Plant Disease. *Indian Journal of Natural Sciences*. 10(60):20792-20800
48. Preetha Bhadra. (2020), In-silico Analysis of Effects of Black Pepper Extracts on Asthma. *Indian Journal of Natural Sciences*. 10(60):20801-20810
49. Preetha Bhadra. (2020), In-silico Analysis of Effects of BlackPepper Extracts on Pulm Pox Virus as Biopesticides. *Indian Journal of Natural Sciences*. 10(60):20733-20741
50. Preetha Bhadra. (2020), In-silico Analysis of Effects of Methi Extracts on Animal Disease Gestational Diabetes. *Indian Journal of Natural Sciences*. 10(60):20725-20732
51. Preetha Bhadra. (2020), In-silico Analysis of Effects of MethiExtract on Plant Disease. *Indian Journal of Natural Sciences* .10(60):20742-20748
52. Preetha Bhadra. (2020) In-silico analysis of *Gymnema sylvestrein* Diabetes. *Indian Journal of Natural Sciences*.10(60):20749-20753
53. Preetha Bhadra. (2020), In Silico Analysis of Hepatoprotective Properties of BaelLeaves. *Indian Journal of Natural Sciences*. 10(60):20754-20763
54. Preetha Bhadra. (2020) In-silico analysis of Roselle (*Hibiscus sabdariffa* L.) for Antidiabetic. *Indian Journal of Natural Sciences*. 10(60): 20764-20768
55. Preetha Bhadra. (2020) In-silico Analysis of Effects of AjwainExtract on Tuberculosis. *Indian Journal of Natural Sciences*. 10(60):20769-20777
56. Preetha Bhadra. (2020), InsilicoAnalysis of Effects of BaelLeaves Extract on Plant Disease. *Indian Journal of Natural Sciences*. 10(60):20778-20785
57. Preetha Bhadra. (2020), In-silico Analysis of Effects of Stevia Extracts on Diabetes. *Indian Journal of Natural Sciences*.10(60):20710-20719
58. Preetha Bhadra. (2020), In-silico Analysis of Effects of Cardamom Extracts as Targeted Therapy for Lung Cancer. *Indian Journal of Natural Sciences*.10(60):20825-20832

59. Preetha Bhadra. (2020) In silico Analysis of Effects of Cardamom Extract on Plant Disease. *Indian Journal of Natural Sciences*. 10(60):20840-20848
60. Preetha Bhadra. (2020), Efficacy of some compounds isolated from *Nyctanthes arbortristis* Linn.on human and plant diseases as revealed from in silico analysis. *Indian Journal of Natural Sciences*. 10(60):20833-20839
61. Preetha Bhadra. A review paper on the Tulsi plant (*Ocimum sanctum*). *Indian Journal of Natural Sciences*.10(60):20854-20860
62. Preetha Bhadra. (2020), Green Chiretta (*Andrographispaniculata*): In silico Analysis of Therapy for Breast Cancer. *Indian Journal of Natural Sciences* . 10(60): 20645-20652
63. Preetha Bhadra. (2020) In-silico Analysis of Effects of Stevia Extract as Biopesticides on Leaf Blight. *Indian Journal of Natural Sciences* . 10(60): 20699-20709

64. Preetha Bhadra. (2020). A Review on Antimicrobial and Phytochemical Effects Of Amla In Skin Care (Anti-Aging). *Indian Journal of Natural Sciences*. 10(60):20849-20853
65. Preetha Bhadra, Atanu Deb. (2018) On the Reduction of Health Hazards Caused by Modified Genes in Indigenous Rice Plant Varieties. *Bioscience Biotechnology Research Communications*. 12(3):779-786
66. Preetha Bhadra. (2020), CuO And CuO@SiO₂ As A Potential Antimicrobial And Anticancer Drug. *Journal of Microbiology, Biotechnology, and Food Sciences*. 9(1):63-69
67. Preetha Bhadra. (2018) Antifungal Peptides: Biosynthesis, Production and Applications. *Bioscience Biotechnology Research Communications*. 11(3):376-386

BOOK PUBLICATIONS: 23

1. Preetha Bhadra (2020). Medicinal Plants as Bio-pesticides. New Delhi Publishers, India. DOI: 10.30954/NDP-advagr.2020.18
2. Preetha Bhadra (2020). Metal Nanooxides as Bio-pesticides. New Delhi Publishers, India. 10.30954/NDP-advagr.2020.15
3. Pradipta Banerjee, Sayantan Maitra, Preetha Bhadra, Sayantani Karmakar, Amitava Das (2020). Nutritional interventions for Prevention of Neurodegenerative Disorders (NDDs). CRC Press, Taylor & Francis, UK.
4. Hossain, A., Ali, M. E., Maitra, S., Bhadra, P., Rahman, M. M. E., Ali, S., & Aftab, T. (2022). The role of soil microorganisms in plant adaptation to abiotic stresses: Current scenario and future perspectives. In *Plant Perspectives to Global Climate Changes* (pp. 233-278). Academic Press.
5. Bhadra, P., Maitra, S., Shankar, T., Hossain, A., Praharaj, S., & Aftab, T. (2022). Climate change impact on plants: Plant responses and adaptations. In *Plant Perspectives to Global Climate Changes* (pp. 1-24). Academic Press.

6. Akbar Hossain, Zahoor Ahmad, Debjyoti Moulik, Sagar Maitra, Preetha Bhadra, Muhammad Adnan Bukhari, Sourav Garai, Mousumi Mondal, Ayman E Sabagh (2020). Jasmonates and Salicylates: Biosynthesis, Transport and Signalling Mechanisms during Abiotic Stress in Plants. Springer (Accepted)

7. Maitra, S., Bhadra, P., Yadav, A. N., Palai, J. B., Jena, J., & Shankar, T. (2021). The Omics Strategies for Abiotic Stress Responses and Microbe-Mediated Mitigation in Plants. In Soil Microbiomes for Sustainable Agriculture (pp. 315-377). Springer, Cham.

8. Preetha Bhadra, Sagar Maitra, Akbar Hossain. Plant-microbe interaction in developing crop species resilient to climate change from omics perspective (2020). Apple Academic Press (CRC Press, Taylor and Francis Group) (accepted).
9. Sagar Maitra, Akbar Hossain, Preetha Bhadra. Role of phytohormones in heat stress tolerance in plants (2020). Apple Academic Press (CRC Press, Taylor and Francis Group) (accepted).
10. Sagar Maitra, Preetha Bhadra, Jnana Bharati Palai, Jagdeesh Jena and Tanmoy Shankar. The Omics Strategies for Abiotic Stress Responses and Microbe-Mediated Mitigation in Plants (2020). Springer Nature.
11. Akbar Hossain, Debjyoti Moulik, Sharif Ahmed, Zahoor Ahmad, Md. Jahangir Alam, Sagar Maitra, Preetha Bhadra, Tariq Aftab. Next-Generation Genetic engineering tools for abiotic stress tolerance in plants (2020). Academic Press, Elsevier.
12. Sagar Maitra, Preetha Bhadra, Tanmoy Shankar. Role of Bioinoculants in Green Agriculture (2020). Taylor and Francis.
13. Preetha Bhadra, Experimental Methods of supercritical extraction using carbon dioxide, Scholar Press
14. Preetha Bhadra, Factors affecting the supercritical extraction, Scholar Press
15. Preetha Bhadra , Advantages of supercritical extraction over other extraction methods, Scholar Press
16. Nanotechnology and Microbiology for Sustainable Agriculture: An Introduction. Wiley-Blackwell Book
17. Role of Engineered Nanoparticles as Fertilizers for enhanced Agronomic Productions. Wiley-Blackwell Book

18. Linking mitochondrial and chloroplast retrograde signalling in plants, APPLE
ACADEMIC PRESS TAYLOR AND FRANCIS GROUP

19. Influence of environmental stress on Calvin cycle pathway and enzymes, APPLE
ACADEMIC PRESS TAYLOR AND FRANCIS GROUP

20. Antioxidants and Functional Foods for Neurodegenerative Disorders: Uses in Prevention
and Therapy, CRC Press

21. The Role of Gibberelin against abiotic stress tolerance

22. The Role of Phytohormones in Heat Stress Tolerance in Plants, Taylor & Francis Group

23. Abiotic Stress Specific Consequences and Mitigation Strategies for Sustainability of Wheat Production in the Era of Changing Climate (2020). (Springer Book).

PARTICIPATION IN CONFERENCE & SEMINARS (AS INVITED/PLENARY/CHAIR)

- Participated as Panellist and delivered a paper on International Conference by Dassault System, Bali, 2019
- Participated as Panellist and delivered a paper on Maharana Pratap University of Agricultural Science and Technology, Udaipur. 2019
- **Got the Best Innovator Award** from Novel IPR Academy and AMTZ for filing maximum number of patents and approvals. 2019
- Participated in **CII AMTZ Start-up Day, Vizag, 2019**
- Participated and Attended symposium on **Emerging Trend in Biological Sciences Research in Health, Nutrition, Environment, Agriculture in Institute of Life Sciences, Bhubaneswar, 2019**
- Participated as Panellist and delivered a paper on **4th National Youth Conference - Agri- Youth, Jabalpur. 2019**
- Participated and Presented paper and Won the Best paper award in **2nd International Conference on Research Trends in Engineering, Applied Science and Management (ICRTE SM-2018)**
- Participated and Presented paper and Won Third prize in **Emerging Technologies, Systems and Applications (ICETSA-2017)"**
- Participated and Presented paper in **International conference on Current Trends in Material Science and Engineering.**

- Participated and Presented paper in **Science Congress 2017**.
- Participated and Presented paper in **ETAE-2016 by IIT-Kharagpur**.
- Presented paper in **Science Congress, 2016**, Presidency Division
- Participated and presented in **Research Scholar Colocium-2016, IEST, SHIBPUR**
- Participated and presented in National Conference of **Indian Society of Hematology & Blood Transfusion (ISHBT)**, held at Puri, India.
- Participated and presented in **3rd Annual Biotechnology Conference for Students (ABCS)**, held at IGNOU –I2IT Centre of Excellence for Advanced Education and Research, Pune, Maharashtra.
- Organized seminar on Glimpse of Medical, Molecular and Marine Biotechnology, held at Institute of Technology and Marine Engineering, Kolkata, West Bengal. 26-27th March, 2010.

OTHER INFORMATION:

SOCIAL & EXTRA CURRICULAR ACTIVITIES

- Acted in a full-length movie as lead named “Hoyto Manush Noy”
- Worked as a lead actor in a short film, which has been selected in short film corner of Cannes(<http://sub.festival-cannes.fr/SfcCatalogue/MovieDetails/37e3b6cb-8df6-4e8e-84e8c75afa8de186>).
- Anindita Sen Cultural Award 2006 in ITME.
- Won in Inter College Choreography Competition in 2007, 2008, 2009.
- National and Zonal Finalist of “Maruti Suzuki” 2012,2011 respectively.
- Won first prize in dancing in I2IT fest Dhruva in 2014.
- Organized number of blood donation camps in colleges.