CURRICULUM VITAE

Dr. Damini Maithani

Assistant Professor (NRM:Plant Microbiology)

College of Horticulture

Sadar Vallabhbhai Patel University of Agriculture and Technology

Meerut- 250110
E-mail:daminimaithani27@gmail.com
ORCID ID: 0000-0001-8770-1691
Scopus ID: 57218204859

AREA OF INTEREST

Agricultural Microbiology, plant and soil health, Biocontrol of plant diseases,Microbial metabolism, Plant growth promoting rhizobacteria, waste management.

EDUCATIONAL QUALIFICATIONS

Qualification	Board/ University	Institution	Year of passing
Ph.D. Microbiology (Major) Plant Physiology (Minor)	GBPUAT Pantnagar	C.B.S.H.	2022
M.Sc. (Microbiology)	GBPUAT Pantnagar	C.B.S.H.	2017
B. Sc. (Zoology, Botany, Chemistry)	Hemvati NandanBahuguna Garhwal University	Government P.G.College Gopeshwar (Chamoli)	2015

RESEARCH CURRICULUM

- Ph.D. Thesis (**2022**) entitled, "**Harnessing the untapped cultural diversity of barnyard millet (*Echinochloa frumantacea*) rhizosphere for potential biocontrol agents with plant growth promoting attributes",** under the supervision of **Dr. Anita Sharma**, Professor, Department of Microbiology, CBSH, G.B. Pant University of Agriculture & Technology, Pantnagar-263145, Uttarakhand.

- M.Sc. Thesis (2017) entitled, **"Comparative phylogenetic analysis of chickpea nodulating rhizobia from Central India and Terai region of Western Himalayas",** under the supervision of **Dr. Manvika Sahgal,** Senior Research Officer (S.R.O), Deptt. of Microbiology, CBSH, G.B. Pant University of Agriculture & Technology, Pantnagar-263145, Uttarakhand.

PARTICULARS OF EXPERIENCES

Research Fellow in a project entitled **"To unravel the potential of biocontrol agents recovered from undermined rhizosphere of barnyard millet: Targeting diseases in Solanaceous crops"** at the Department of Microbiology, College of Basic Sciences & Humanities, G. B. Pant University of Agriculture & Technology, Pantnagar-263145, Uttarakhand, INDIA. (20/11/2020– 19/05/2021)

Graduate Teaching Assistant for three courses "Introductory Microbiology (BBM-300)" and "Application of Microbial Methods (BBM-610)" at the Department of Microbiology, College of Basic Sciences & Humanities, G. B. Pant University of Agriculture & Technology, Pantnagar-263145, Uttarakhand, INDIA. (II Semester, 2014-15 to II Semester, 2015-16).

Assistant professor in School of Biotechnology, IFTM University, Moradabad **(August 2022 to August 2023).**

Assistant Professor in School of Bioengineering and Biosciences at **Lovely Professional University, Punjab (August 2023 to May 2024).**

Assistant Professor, Department of Microbiology, Dev Bhoomi Uttarakhand University Dehradun (15 July to present)

Assistant Professor (NRM: Plant Microbiology, SVPUA&T, Modipuram, Meerut) (Currently working)

Academic Achievements/ Awards and Accomplishments

ARS NET (Agricultural Microbiology)-2017
ARS NET (Agricultural Microbiology)-2018
GATE-Life Science (Graduate Aptitude Test in Engineering)- 2017
GATE-Life Science - 2018: **(AIR: 85)**
U-SET (Uttarakhand State Eligibility Test)-2017
CSIR-NET(LS)- 2020
Title of **Amul Vidyashree** for outstanding academic performance in CBSE (March-April-2010)
School Topper (Class 10^{th}) with **9.6** CGPA (2010)
Distinction in Master's Degree Programme (2017)
Third prize in the category of Aditi Pant Women Scientist award in international conference on Microbial bioprospecting towards Sustainable development goals held at LPU.

MEMBERSHIPS
Life member Association of Microbiologists of India

Workshops/ Seminars/Conferences

- **National training Workshop** on "A journey towards system biology: Biocomputing of Hi-throughput omics data" conducted by Bioinformatics Sub DIC, Pantnagar and sponsored by DBT, Government of India, from 08 to 11 October, 2018.
- **Training Workshop** for capacity building of Educational Institutions about water quality with special reference to water safety and security organized by UCOST Dehradun and

Uttarakhand Jal Sansthan, Dehradun in technical collaboration with Department of Environmental Sciences, G.B. Pant University of Agriculture & Technology, Pantnagar.

- **Oral Presentation** entitled "Genetic heterogeneity and diversity analysis of chickpea nodule endophytes grom two geographically different regions" at Uttarakhand Council for Science and Technology, Vigyan Dham, Dehradun.
- **Oral Presentation** in International conference on Recent Advances in Agriculture, Engineering and Biotechnology for food security on the topic "Characterization of bacterial endophytes trapped by chickpea from two geographically different regions".
- **Hands on workshop**: "Molecular Biology- concepts and applications in viral diagnostics" at AIIMS Bhopal from 18th to 20th December, 2018.
- **Participated in** International conference on Microbial Bioprospecting Towards Sustainable Development Goals organized by AMI LPU Unit and Society of Chemical and Synthetic Biology at LPU, Punjab.

Faculty Development Programme attended

1. Faculty development programme on NEP- 2020 Orientation and Sensitization under Malaviya Mission Teacher Training Programme (MM-TTP) of University Grants Commission (UGC) Organized by Malaviya Mission Teacher Training Centre, University of Hyderabad (MMTTC-UoH) from **05th February to 13th February** 2024.

Administrative and other responsibilities

(1) **Worked as coordinator for school cultural committee and received Certificate of appreciation** for participation as faculty coordinator of cultural event "PARAKRAM" and SAMAVESH organized at IFTM University.
(2) Member of Student development and cultural committee.
(3) Member of publicity and media chair in ICMBSDG 2023.
(4) Member of Research committee in International Conference on "Microbial Bioprospecting Towards Sustainable Development Goals".
(5) Activity coordinator (Department of Microbiology and Biotechnology).
(6) NAAC Criteria 9 (champion/member)

Data submitted at NCBI GenBank databases: in public domain
Nucleotide sequences: 28 (https://www.ncbi.nlm.nih.gov/nuccore/?term=Maithani)

PUBLICATION RECORD

Review articles

1. **Maithani, D**., Sharma, A., Gangola, S., Choudhary, P., & Bhatt, P. (2022). Insights into applications and strategies for discovery of microbial bioactive metabolites. *Microbiological Research*, 127053. **(IF:6.7)**
2. **Maithani, D**., Sharma, A., Gangola, S. *et al*. Barnyard millet (*Echinochloa* spp.):a climate resilientmultipurpose crop. *Vegetos* (2022). https://doi.org/10.1007/s42535-022-00420-4.
3. Upadhayay, D., Kumar, V., Chitara, M. K., Mishra, D., Jha, M. N., Jaiswal, A., **Maithani,D**., Kumar,A., Dasila,H., Sharma.,A. Synergistic impact of nanomaterials and plant probiotics in agriculture: A tale of two-way strategy for long-term sustainability. *Frontiers in Microbiology*, *14*, 835. **(IF:5.2).**
4. Bhatt, P., Bhandari, G., Bhatt, K., **Maithani, D.,** Mishra, S., Gangola, S., & Chen, S. (2021). Plasmid-mediated catabolism for the removal of xenobiotics from the environment. *Journal of Hazardous Materials*, *420*, 126618. **(IF:13.6).**

5. Singh, K., Gera, R., Sharma, R., **Maithani, D**., Chandra, D., Bhat, M. A., & Bhatt, P. (2021). Mechanism and application of Sesbania root-nodulating bacteria: an alternative for chemical fertilizers and sustainable development. *Archives of Microbiology*, *203*(4), 1259-1270. **(IF:2.8).**
6. Bhatt, P., Gangola, S., Bhandari, G., Zhang, W., **Maithani, D**., Mishra, S., & Chen, S. (2021). New insights into the degradation of synthetic pollutants in contaminated environments. *Chemosphere*, *268*, 128827 **(IF:8.8).**
7. Upadhyay, H., Gangola, S., Sharma, A., Singh, A., Maithani, D., & Joshi, S. (2021). Contribution of zinc solubilizing bacterial isolates on enhanced zinc uptake and growth promotion of maize (Zea mays L.). *Folia microbiologica*, *66*, 543-553.
8. Singh, H., Sharma, A., **Maithani, D**., & Singh, M. C. BIODEGRADATION OF PESTICIDES IN SOIL–A REVIEW.

Research Papers

1. **Maithani, D.**, Sharma, A. (2021). Identification of fungal pathogens associated with fruit rot of Solanum melongena L. in Pantnagar (Uttarakhand). **(NAAS Rating : 5.23).**
2. Dasila, H., Anjul, R., **Maithani D**., A. R., Manvika, S., & Salil, T. (2018). Interaction between Dalbergia sissoo Roxb. and Pseudomonas koreensis AS15 Strain is Cultivar Specific. *Inter J Curr Microbiol App Sci*, *7*(10), 297-306.
3. Chaudhary, P., Khati, P., Chaudhary, A., **Maithani, D**., Kumar, G., & Sharma, A. (2021). Cultivable and metagenomic approach to study the combined impact of nanogypsum and Pseudomonas taiwanensis on maize plant health and its rhizospheric microbiome. *PloS one*, *16*(4), e0250574.
4. Chaudhary, P., Sharma, A., Chaudhary, A., Khati, P., Gangola, S., & **Maithani, D**. (2021). Illumina based high throughput analysis of microbial diversity of maize rhizosphere treated with nanocompounds and Bacillus sp. *Applied Soil Ecology*, *159*, 103836. **(IF:4.8)**.
5. Singh, H., **Maithani, D**., Singh, M. C., & Priyadarshi, M. B. (2020). Study of antimicrobial activity of some selected weed species. *International Journal of Science, Environment and Technology 9 (1)*, 61-65.
6. Kukreti, B., Sharma, A., Chaudhary, P., Agri, U., & **Maithani, D**. (2020). Influence of nanosilicon dioxide along with bioinoculants on Zea mays and its rhizospheric soil. *3 Biotech*, *10*(8), 1-11.**(IF:2.8).**
7. Upadhyay, H., Gangola, S., Sharma, A., Singh, A., **Maithani, D**., & Joshi, S. (2021). Contribution of zinc solubilizing bacterial isolates on enhanced zinc uptake and growth promotion of maize (Zea mays L.). *Folia Microbiologica*, *66*(4), 543-553.**(IF: 2.6)**
8. Kumar, A., Saini, K. S., Dasila, H., Kumar, R., Devi, K., Bisht, Y. S., ... & Kaushik, P. (2023). Sustainable Intensification of Cropping Systems under Conservation Agriculture Practices: Impact on Yield, Productivity and Profitability of Wheat. *Sustainability*, *15*(9), 7468.**(IF: 3.9).**
9. SUYAL, D. C., Gola, U., Kour, S., Kaur, T., Perveen, K., Bukhari, N. A., Alsulami, J.A. **Maithani, D**, Dasila,H., & Singh, M. Prokaryotic diversity and community structure in the rhizosphere of Lantana weed (Lantana camara L.). *Frontiers in Plant Science*, *14*, 1364. **(IF: 5.6).**

Book Chapters

1. **Maithani, D**., Dasila, H., Saxena, R., Tiwari, A., Bhatt, D., Rawat, K., & Suyal, D. C. (2023). Heavy Metal Pollution in Water: Cause and Remediation Strategies. In Current Status of Fresh Water Microbiology (pp. 181-204). Singapore: Springer Nature Singapore.
2. **Maithani, D**., Sharma, A., Dasila, H., Tiwari, A., & Upadhayay, V. K. (2023). 16 Nanotechnology for Crop Improvement and Sustainable Agriculture. *Advances in Nanotechnology for Smart Agriculture: Techniques and Applications*, 323.
3. **Maithani, D.,** Singh, H., & Sharma, A. (2021). Stress alleviation in plants using SAR and ISR: current views on stress Signaling network. In *Microbes and Signaling*

Biomolecules Against Plant Stress (pp. 7-36). Springer, Singapore.

4. **Maithani, D.,** Sharma, A., Arvindharajan, S.T.M (2023). Strategies And implications of plant growth promoting rhizobacteria in sustainable agriculture. In *Advanced microbial techniques in agriculture, environment and health management.* Elsevier
5. Kour, D., Kaur, S., Kaur, T., Sharma, B., Negi, R., Khan, S. S., ... & Ahluwalia, A. S. (2025). Biodiversity and biotechnological applications of rhizomicrobiome for agricultural, environmental and industrial sustainability. In *Rhizomicrobiome in Sustainable Agriculture and Environment* (pp. 107-157). Academic Press.
6. Khan, S. S., Sharma, B., Negi, R., Kaur, S., Kaur, T., **Maithani, D.,** ... & Ahluwalia, A. S. (2025). Rhizomicrobiome: Biodiversity and functional annotation for agricultural sustainability. In *Rhizomicrobiome in Sustainable Agriculture and Environment* (pp. 1-38). Academic Press.
7. Dasila, H., Kukreti, B., Bisht, S., **Maithani, D**., Upadhayay, V. K., & Pandey, S. **(2024)**. Approaches to Degrading Polystyrene (PS) Using Diverse Microorganisms. In Advanced Strategies for Biodegradation of Plastic Polymers (pp. 145-163). Cham: Springer Nature Switzerland.
8. Kannojia, K., Joshi, D., & **Maithani, D.** (2024). Technological advancements for biomedical waste management. Biomedical Waste Management: Bioremediation and Recycling, 51.
9. Joshi, D., Suyal, D. C., Singh, J., **Maithani, D**., Rajwar, J., Preeti, ... & Singh, D. **(2024)**. Plant Growth-Promoting Psychrotrophic Microbes: Current Research and Future Challenges. *Microbial Inoculants: Applications for Sustainable Agriculture*, 247-280.
10. Srivastava, P., Chaudhary, P., Mishra, A., Dasila, H., & **Maithani, D. (2024).** Influence of Microbial Inoculants on Soil Health. In *Microbial Inoculants: Applications for Sustainable Agriculture* (pp. 29-48). Singapore: Springer Nature Singapore.
11. Debbarma, P., Suyal, D. C., Kumar, S., Joshi, D., Singh, M., Rajwar, J., Rawat, B., Dasila, H., **Maithani, D.,** & Soni, R. (2023). Bioremediation of E-waste Through Microbial Exopolysaccharides: A Perspective. In *Microbial Technology for Sustainable E-waste Management* (pp. 245-257). Cham: Springer International Publishing.

12. Dasila, H., Joshi, D., Verma, S., **Maithani, D**., Rawat, S. K., Kumar, A., ... & Suyal, D. C. (2023). Hazardous waste: impact and disposal strategies. In *Advanced Microbial Techniques in Agriculture, Environment, and Health Management* (pp. 153-166). Academic Press.
13. Khati, P., Lohani, S., Raypa, P., Sharma, A., Kumari, A., Maura, J., ... & **Maithani, D.** (2023). Nanoparticles and Their Application as Nano-bioformulations in Agriculture. *Advances in Nanotechnology for Smart Agriculture: Techniques and Applications*, 161.
14. Dasila,H., Joshi,D.,Verma.,S.,**Maithani,D.,** Rawat.s., Kumar,A.,Suyal,N., Kumar,N. amd Suyal,D.C.(2023). Hazardous waste: impact and disposal strategies. In *Advancedmicrobial techniques in agriculture, environment and health management.* Elsevier.
15. Upadhyay V.K., **Maithani .D,** Dasila H., Taj, G., Singh, A. (2023). Microbial services for mitigation of biotic and abiotic stresses in plants. In *Advanced microbial techniques in agriculture, environment and health management.* Elsevier
16. Dasila, H., **Maithani, D**., Suyal, D. C., & Debbarma, P. (2022). Cold-Adapted Microorganisms: Survival Strategies and Biotechnological Significance. In *Survival Strategies in Cold-adapted Microorganisms* (pp. 357-378). Springer, Singapore.
17. Ranjan, P., **Maithani, D**., Suyal, D. C., Singh, A. K., Giri, K., Sharma, V. K., & Soni, R. (2022). Microbial Fuel Cells for Wastewater Treatment. In *Bioremediation of Environmental Pollutants* (pp. 53-74). Springer, Cham.

18. Debbarma, P., Joshi, D., **Maithani, D**., Dasila, H., Suyal, D. C., Kumar, S., & Soni, R.,(2021). Sustainable Bioremediation Strategies to Manage Environmental Pollutants. In *Removal of Refractory Pollutants from Wastewater Treatment Plants* (pp. 267-288). CRC Press.

Reviewer in journals

S.No.	Journal	Impact Factor
1	Frontiers in Microbiology	4.0
2	Heliyon	3.4
3	Scientific Reports	
4	Frontiers in Agronomy	3.5
5	Archives of Microbiology	2.6

Editorial role : Guest editor in Frontiers in Bioengineering and Biotechnology **(Under process)**

Project : Granted by UCOST (Development of microbial consortium for food waste management in Dehradun, Uttarakhand not completed)

Patent:**Application number:** 202311001021

Title of invention: A liquid biodegradable fertilizer material made of biological components

Applicants: Dr.Manisha, Mr.Himanshu, Manshi Nautiyal, Dr.Deepak Kumar, Dr. ArunKumar, Dr. Hemant Dasila, Dr.Damini Maithani, Dr. Gaurav Jain.