Personal Profile

Dr. Bipin Maurya (Ph.D.)
Affiliation:
Assistant Professor (G)
Department of Botany
Maharaja Suhel Dev University, Azamgarh, U.P India.
Contact- 09651702006
Email-bipinmaurya841@gmail.com,bipin.maurya@bhu.ac.in

Sex: Male Date of birth: 24/08/1992 Nationality: India

Educations:

1. Ph.D.- 2023 76.12% First class.

"Effects of abiotic stress factors on growth and secondary metabolite production in *Withania coagulans* (L.) Dunal*."* (2017-2023)

Laboratory of Morphogenesis, Department of Botany, Institute of Science, Banaras Hindu University, Varanasi, India 221005

2. Master of Science in Plant Biotechnology (2014)

Department of Genetics and Plant breeding, Institute of Agricultural Sciences, Banaras Hindu University, Varanasi, India - CGPA: 7.67 First class.

Dissertation Project on Topic: *"Purification and biochemical characterization of Peroxidase from "Nerium indicum."*

3. Bachelor of Science in Zoology, Botany and Chemistry (2011)

University of Lucknow, Lucknow, India: 63.14% First class.

4. Intermediate – UP Board- Children Higher Secondary School Azamgarh- 60% First class.

5. High School - UP Board- Children Higher Secondary School Azamgarh- 66% First class.

Scholastic achievement

i. Qualified CSIR-UGC-NET Life Sciences AIR- 78 (2016).
ii. DBT JRF II - (2016)
iii. Qualified GATE 2016 – 92.6 PERCENTILE (GATE SCORE-450) AIR-771
iv. Qualify GATE 2019 – GATE SCORE- 291
v. CSIR-UGC-NET Life Sciences AIR- 106 JUNE (2020)
vi. Qualify U.P. HIGHER EDUCATION SERVICES COMMISSION Assistant Professor Botany written Examination- 2022

vii. Qualify MPPSC Assistant Professor Botany written examination 2024.

Specialization

Plant Biotechnology, Molecular biology, Plant tissue culture, Plant secondary metabolism, stress physiology, Plant physiology, Genetics, Basic Bioinformatics-Sequence and Structural Analysis: Pair-wise and Multiple Sequence Alignment and Structural Assessment, Tertiary and secondary structure prediction, Phylogenetic analysis, Protein modeling, Primer designing. Statistical analyses: One Way and Two Way of ANOVA, t-test.

Research expertise:

Plant tissue culture- In-vitro culture, artificial seed, organogenesis, callus formation, protoplast culture, anther-culture, different types media handling, secondary metabolite extraction- HPLC and GC-MS

Molecular Biology techniques

Isolation & Quantification of Genomic DNA, Plasmid DNA and total RNA
PCR analysis
Gene Expression analysis by RT PCR.
Transformation by electroporation and *Agrobacterium* mediated.

Biochemical techniques

Quantification of protein, Carbohydrate, Phenol, Proline, Total sugar, Chlorophyll, Carotenoid, Anthocyanin, NBT staining, DAB staining etc.
Enzyme quantification (super oxide dismutase, catalase, polyphenol, etc.)
HPLC and GC-MS.

Electrophoresis

SDS-PAGE
Agarose Gel Electrophoresis

Publications

1. **Maurya B**, Rai KK, Pandey N, Sharma L, Goswami NK, Rai SP. Influence of salicylic acid elicitation on secondary metabolites and biomass production in in-vitro cultured *Withania coagulans* (L.) Dunal. Plant Archives. 2019;19(1):1045-308.
2. **B Maurya,** S Kumari, N Rai, Lakee Sharma, Shreya, V K Singh and SP Rai *In-silico* identification and structural validation of RCD1-like SRO gene family member and analysis of its role in modulation of abiotic stress responses in *Withania coagulans* (L.) Dunal, Journal of Scientific Research.
3. Sharma, L., **Maurya, B.,** Pandey, S., Rai, K. K., & Pandey-Rai, S. (2023). Structural and functional prediction of WsMYB34 transcription factor in Withania somnifera (L.) Dunal by deciphering its role in NaCl-induced secondary metabolism. *Industrial Crops and Products*, *206*, 117682.
4. Sharma L, **Maurya B,** Pandey S, Rai KK, Pandey-Rai SP. Identification and validation of WsMYB34 transcription factor for salt tolerance and induced secondary metabolism in *Withania somnifera*.

5. Sharma L, **Maurya B**, Rai SP. In-Silico Structural and Functional Characterization of WsMYB44 Protein from *Withania somnifera* L. Dunal"
6. Sharma L, **Maurya B**, Rai SP. An overview of biotechnological interventions and abiotic elicitors on biomass and withanolide biosynthesis in *Withania somnifera* L. Dunal. **IF-6.449**
7. Sharma L, **Maurya B**, Rai SP. Salt induced modulations in morphological, physiological, and metabolic attributes in in-vitro grown shoots of *Withania somnifera* L. (Dunal). **IF- 2.726**
8. Mishra, V., Kumar, P., Singh, J., Varshney, V., Shukla, P., & **Maurya, B**. (2023). Dietary microRNAs (miRNAs) and Their Cutting-Edge Use in Food Science. Food Science and Engineering, 130-142.
9. PRP4KA phosphorylates SERRATE and promotes its degradation to coordinate miRNA production V Mishra, **B Maurya** - Journal of Plant Biochemistry and Biotechnology, 2023 **IF-1.525**
10. Rai N, Sharma L, **Maurya B**, Rai KK, Meena RP, Rai SP. Structural and functional characterization of NAC transcription factor genes in *Artemisia annua* using computational approaches, Plant Archives 2020.
11. **Maurya B**, Sharma L, Rai SP. Current status of endangered plant *Withania coagulans*: An insight to Pharmacological application, strategies for its conservation and secondary metabolite production. In press
12. Bisen, M. S., **Maurya, B.,** Singh, S., Kumari, S., Saha, P., Rai, N., & Rai, S. P. (2024). Optimization of critical factors influencing In-vitro multiplication, hydroponic establishment and deferential gene expression analysis in *Withania coagulans* (L.) Dunal. *Plant Archives (09725210)*, *24*(2).

Book Chapters

1. **Maurya B.,** Sharma L., Apoorva, Rai S P. Carica Papaya: Pharmacological, Nutritional and its therapeutic uses. In Book Innovation in Life Science Research (Nova Publishers) (2019)
2. **Maurya B**., Sharma L., Kumari S., Rai N, Rai S P. Plant-Ecogenomics: Challenges and opportunities. In Book Plant Ecogenomics (Apple Academic Press) (2022).
3. Prasad D R., Minocha T., **Maurya B**., Yusuf P.Y. Advancement in Molecular tools of Plant Population Genetics. In Plant Ecogenomics (Apple Academic Press) (2022).
4. Prasad D R., **Maurya B.,** Mishra A. Neuroprotective effect of *Ginkgo biloba* and its role in Alzheimer's disease. In Book Indopathy for Neuroprotection (Bentham Science Publishers) (2022).
5. **Maurya, B.,** Sharma, L., Rai, N., Mishra, V., Kumar, A., & Rai, S. P. (2024). Plant miRNAs: biogenesis, mode of action, and their role. In miRNAomics and stress management in plants (pp. 20-35). CRC Press.
6. **Maurya B.,** Mishra V., Rai S P. Role of Plant miRNAs in Plant-Pathogen Interactions. In book miRNAomics and stress management in plants (CRC Press) (2022).
7. **Maurya, B.,** Mishra, V., Divyanshu, K., & Nishad, J. H. (2024). Pros and cons of genetic engineering technologies in reference to biofortified crops. In *Harnessing Crop Biofortification for Sustainable Agriculture* (pp. 349-370). Singapore: Springer Nature Singapore.
8. Nishad, J. H., & **Maurya, B.** (2026). Harnessing the Power of Beneficial Plant–Microbe Synergy in Sustainable Agriculture. In *Plant–Microbe Interactions for Sustainable Growth and Resilience* (pp. 219-233). CRC Press.

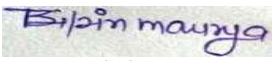
Book Edit-

Working as editor in proposed book title **"Decoding of Metabolomics Network in NextGen Crop Improvement" CRC press taylor and francis (In Press)**

InternationalSymposium/Conference

1. **Bipin Maurya,** Lakee Sharma, Sneha Singh and Shashi Pandey Rai* Effect of Salicylic acid elicitation on morphology, biomass production and secondary metabolism in *in-vitro* cultured *Withaniacoagulans*(L). ISEFA 2022
2. **Bipin Maurya**, Lakee Sharma, Shashi Pandey Rai* Impact of salicylic acid elicitation on morphology and secondary metabolism in *in-vitro* grown *Withania coagulans* (L.) Dunal' Advances in Molecular Biology of Abiotic Stress Tolerance in the international E-Conference organised by the Department of Biotechnology and Crop Improvement, College of Horticulture, Bengaluru during 24-27th November, 2020.

3. **Bipin Maurya**, Lakee Sharma, Sneha Singh and Shashi Pandey Rai* To elucidate the effect of Salicilyc Acid on *in-vitro* grown seedlings of *Withania coagulans*. BBAU December 2021.
4. **Bipin Maurya,** Deepika Tripathi, Lakee Sharma and Shashi Pandey-Rai*Fabrication of biocompatible silver nanoparticles via in-vitro propagated endangered plant *Withania coagulans* and their biomedical applications. CTPSR 2019 Department of Botany, Banaras Hindu University.



Place- Azamgarh **Dr. Bipin Maurya**

Assistant Professor(G)