Dr.MohneeshKalwani

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GoogleScholarID:https://scholar.google.com/citations?user=I5f7D6UAAAAJ&hl=en

ProfessionalSummary

Dedicated and enthusiastic microbiologist with a Ph.D. in Microbiology from Banaras Hindu University (BHU) (2024) and academic experience as Guest Faculty andAssistant Professor. Skilled in large-scale microbial (algal) cultivation, bioprocess optimization, wastewater valorization, and biogas production from microalgal biomass. Experienced in analytical techniquesincludingGC,HPLC,andbioinformaticstools,withproficiencyinRandSPSSfor data analysis. Recognized with the Young Biotechnologist Award for excellence in applied microbiology.Acollaborativeteamplayerandemergingleader, committedtobridgingresearch and industry for sustainable biotechnological innovations.

Education

Ph.D.inMicrobiology—BanarasHinduUniversity(BHU),2024

M.Sc.inMicrobiology—AmityUniversity,Noida,2018

B.Sc(Hons).inBotany—BanarasHinduUniversity(BHU),2015

ProfessionalExperience

AssistantProfessor(Biotechnology)

DepartmentofBiotechnology,Dr.GhanshyamSinghMahavidyalaya,Varanasi,Uttar Pradesh

November2024–Present

- Teachingandmentoringundergraduateandpostgraduatestudentsinbiotechnology
- Engaginginappliedmicrobiologyprojectsfocusingonwastewaterremediationby microalgae.
- Coordinatingdepartmentalacademicandoutreachactivities.

GuestFaculty(Microbiology/Biotechnology)

MicrotekCollegeofEngineeringandManagement,Varanasi,UttarPradesh 2018 – 2020

- Deliveredlecturesonbiotechnology.
- Assistedinpracticaltrainingofundergraduateandpostgraduatestudents .

Research&VolunteerWork

DoctoralResearchScholar—SchoolofBiotechnology,BHU

- ConductedPh.D.researchonlarge-scalecultivationof*Chlorellasorokiniana*for wastewater treatment, high-value metabolite production
- Operated1000Lopenraceways.

TechnicalSkills

- **BioprocessEngineering:**Operationopenracewayponds(upto1000Lcapacity), biogas production from microalgal biomass
- **AnalyticalTechniques:**GasChromatography(GC),High-PerformanceLiquid Chromatography (HPLC), spectrophotometric analyses
- **EnvironmentalBiotechnology:**Wastewaterandsoilcharacterization,nutrient sequestration
- **Microbial&MolecularTechniques:**Microalgalisolationandculturemaintenance, DNA extraction, aseptic techniques
- **Biofertilizer&BioenergyProduction:**Liquidbiofertilizerformulation,process optimization, microalgal biomass valorization
- **DataAnalysis&Modeling:**ANN–MOGAforbioprocessoptimization,Rsoftware, SPSS
- **FieldStudies:**Ricefieldmicrobiomeandsoilproductivityanalysis

Publications(Peer-Reviewed,Q1Journals)

1. **Kalwani, M.,**Minhas,A. K., Shukla, P., & Pabbi, S. (2025). Efficient nutrient sequestrationandbiomoleculeproductionby*Chlorellasorokiniana*MSP1cultivated in industrial wastewater. *Journal of the Taiwan Institute of Chemical Engineers*, 105979. [https://doi.org/10.1016/j.jtice.2025.105979] (IF: 5.5) #Joint first author

2. **Kalwani, M.,**Kumari,A., Rudra, S. G., Chhabra, D., Pabbi, S., & Shukla, P. (2024). Application ofANN-MOGA for nutrient sequestration for wastewater remediation andproductionofPUFAby*Chlorellasorokiniana*MSP1.*Chemosphere*,349,140835. [https://doi.org/10.1016/j.chemosphere.2023.140835] (IF: 8.8)

3. Srivastava,A., **Kalwani, M#,**Chakdar, H., Pabbi, S., & Shukla, P. (2022). Biosynthesisandbiotechnologicalinterventionsforcommercialproductionof microalgal pigments: a review. *Bioresource Technology*, 352, 127071. [https://doi.org/10.1016/j.biortech.2022.127071] (IF: 11.4) #Joint first author

4. **Kalwani,M.,**Chakdar,H.,Srivastava,A.,Pabbi,S.,&Shukla,P.(2022).Effectsof nanofertilizersonsoilandplant-associatedmicrobialcommunities:Emergingtrends and perspectives. *Chemosphere*, 287, 132107. [https://doi.org/10.1016/j.chemosphere.2021.132107] (IF: 8.8) #Joint first author

Book Chapters

1. Kalwani, M., Devi,A., Patil, K., Kumari,A., Dalvi,V., Malik,A.,Tyagi,A., Shukla, P.,&Pabbi,S.(2022).Microalgae-mediatedwastewatertreatmentandenrichmentof wastewater-cultivated biomass for biofuel production. In *Expanding Horizon of CyanobacterialBiology*(pp.259–281).AcademicPress(Elsevier),USA. [https://www.elsevier.com/books/expanding-horizon-of-cyanobacterial-biology/singh/978-0-323-91202-0]

2. Devi,A.,Kalwani,M.,Patil,K.,Kumari,A.,Tyagi,A.,Shukla,P.,&Pabbi,S.(2023). Microalgal Bio-pigments: Production and Enhancement Strategies to Enrich Microalgae-Derived Pigments. In *Cyanobacterial Biotechnology in the 21st Century* (pp. 85–106). Springer Nature, Singapore. [https://link.springer.com/chapter/10.1007/978-981-99-0181-4_6]

Posterpresented/Oralpresentation

1. **KalwaniM,**PatilK,DeviA,ShuklaPandPabbiS.Assessingbioremediationpotentialand biomoleculeproductionofmicroalgaecultivatedinagriculturewastewaterPosterpresented at: ENB Conference; 2023 Feb 12-14; Banaras Hindu University, India
2. **Kalwani M,**Patil K, Shukla P and Pabbi S.Assessing bioremediation potential and biomoleculeproductionofmicroalgaecultivatedinagriculturewastewaterPosterpresented at:AMI Conference; 2023 Feb 02-04; Maharshi Dayanand University, Haryana

3. **KalwaniM,**Elucidatingroleofindustrialwastewateronthegrowthof*Nannochloropsis occulata*MK1forbiomoleculeproductionOralPresentationat:ShodhSangam;2024Feb23-24; Banaras Hindu University, India
4. **Kalwani M,**Simultaneous nutrient uptake and metabolites production by *Chlorella sorokiniana* MSP1 cultivated in industrial wastewater usingAI Tools Invited Talk; InternationalSymposiumonBioresourceTechnology;2025April11-13;Vijayapura, Karnataka, India

Awards

- **YoungBiotechnologistAward,2025(SocietyofAppliedBiotechnology)**—for outstanding contribution to research in applied microbiology and biotechnology

Membership

- LifeMember,AssociationofMicrobiologists(AMI)of India

Reviewer

- ProcessBiochemistry(17)
- MicrobiologicalResearch(4)
- ScienceofTotalEnvironment(2)

TeachingInterest

Microbiology,IndustrialBiotechnology,PlantBiotechnology,ImmunologyandCellBiology

ThesisSupervision

M.Sc:

Guided: None,**Guiding:**3

Languages

- Hindi – Native
- English – Fluent
- German– Intermediate

PersonalAttributes

Teamplayer|Enthusiastic|Dedicated|Determined|Leadershippotential|Research-oriented

AdministrationRole

- Member,FacultyDevelopmentCommittee
- Member,ControllerofExaminationCommittee

List ofreferences

DrAjay Kumar Singh

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8960639724

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DrPrashantSingh

CentreofAdvancedStudies,DepartmentofBotany,InstituteofScience,BanarasHindu University, Varanasi, 221005 Uttar Pradesh

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DrAnupKumarSingh Head

of Department

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