

Mohammadsakil Badi

Male | 24 Yr

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Profile Highlight:

A dynamic and results-driven M.Sc. Biotechnology graduate with a solid foundation in scientific principles and a passion for innovation. Possessing a keen eye for detail and a strong work ethic, I am eager to leverage my academic knowledge and research experience to contribute to cutting-edge projects in the biotechnology industry. With excellent problem-solving skills, a collaborative mindset, and a commitment to excellence, I am confident in my ability to drive impactful outcomes and make a meaningful contribution to the field.

Academics:

Degree	University/Board	%/CGPA
B.Sc. Biotechnology	Department of Biotechnology, Atmiya University - Rajkot	6.59/10
M.Sc. Biotechnology	Department of Biotechnology, Atmiya University - Rajkot	6.03/10

Project:

- **M.Sc Dissertation:** *"Screening of the inhibitory potential of the antagonistic bacteria isolated from Marine Environment and Mangrove Soil against AMR pathogens."*

Place: Department of Biotechnology, Atmiya University, Rajkot, Gujarat, India

Guide Name: Dr.Debashis Banerjee

Project Duration: December 2023 – April 2024

Project Details: "Five different species of antimicrobial-resistant (AMR) drug agents were identified within the marine environment, demonstrating promising efficacy against multidrug-resistant (MDR) pathogens. This research represents a significant advancement in the fight against antibiotic resistance and offers new hope for combating challenging infections. As a key achievement, five antagonistic Bacterial gene sequences from the study were published on NCBI, and two research papers based on this work are currently "Manuscripts under review" for publication.

Significant Achievement:

- Five gene sequences published on NCBI. Accession numbers were obtained are PP446663, PP446674, PQ097291, PQ097290 & PQ097289
 - Two research papers "Manuscripts under review" for peer-reviewed publication.
- **B.Sc Dissertation:** *"A Study on Recent Technologies in Chronic, Delayed Diabetic Wound Healing Therapeutics"*
- Place:** Department of Biotechnology, Atmiya University, Rajkot, Gujarat, India
- Guide Name:** Dr.Shivani Tank
- Project Duration:** January 2022 – May 2022

Project Details: Recent technologies in chronic and delayed diabetic wound healing therapeutics have significantly advanced, offering new hope for improved outcomes. Advanced wound dressings, such as hydro gels and alginate dressings, provide optimal healing environments. Innovations in biologics, including stem cell therapies and growth factors, promote tissue regeneration and repair. Gene therapy and smart dressings with integrated sensors enable precise and personalized treatment. Additionally, therapies like low-level laser therapy and hyperbaric oxygen therapy enhance cellular processes and reduce infection, accelerating healing.

Publication:

- **Book Chapters (Accepted):** Mohammadsakil Badi and Debashis Banerjee. Bioplastics degradation and valorization of biodegradable Bioplastics. In Bioplastics: Synthesis, Characterization, and application Apple Academic Press Exclusive Co-Publishing with CRC Press Taylor & Francis Group. <https://mail.appleacademicpress.com/bioplastics-synthesis-characterization-and-applications/9781779520500>
- **Under Communication:** Mohammadsakil Badi, Ishita Raninga, Mausami Das and Debashis Banerjee."A Comprehensive Study of Omicron Variants: Origin, Classification, Epidemiology, Symptoms and Therapeutic Interventions".
- **Under Communication:** Mohammadsakil Badi, Ishita Raninga and Debashis Banerjee." Recent Advances in Therapeutic Technologies for Chronic and Delayed Diabetic Wound Healing: A Comprehensive Review "
- **Under Communication:** Mohammadsakil Badi, Ishita Raninga and Debashis Banerjee." Bacteriophage Therapy: A One Health Solution to Combat Antimicrobial Resistance"

Internship:

- **Summer Internship:**

Place: Sharda Laboratory, Rajkot, Gujarat

Under The Mentor: Mr.Rajen Pambhar

Duration: 24 May 2023 – 24 June 2023

Internship Details: One-month summer internship in a pathology laboratory, where I gained valuable hands-on experience in various aspects of diagnostic pathology. During this internship, I actively participated in specimen collection, processing, and analysis under the supervision of senior pathologists. I developed skills in preparing tissue samples for microscopic examination, using staining techniques to enhance cellular details, and interpreting test results. This experience not only strengthened my understanding of laboratory protocols and quality control but also exposed me to the importance of accurate diagnostic procedures in healthcare settings.

Lab skills:

- **Microbiology Techniques:** Environmental and Clinical Sample Analysis, Microbial Culture Techniques, Staining Techniques, Antimicrobial Susceptibility Testing, Bio-film formation, Antagonistic assay
- **Molecular techniques:** DNA Isolation, SDS-PAGE (Polyacrylamide Gel Electrophoresis), Cloning and Recombinant DNA Techniques
- **Analytical techniques:** UV/Visible Spectroscopy and Various Biochemical Assays
- **Bioinformatics:** Sequence Analysis, Database Management
- **Animal Cell Culture Techniques:** Maintenance and Handling of Cell lines, Biochemical Assays, Cryopreservation
- **Immunology:** ELISA (Enzyme-Linked Immunosorbent Assay), Cytokine Analysis, Agglutination and Precipitation Assays, T-cell and B-cell Activation Assays
- **Plant-Tissue culture:** Media Preparation, Aseptic Techniques, Explants Selection and Preparation, Micro propagation, Callus Induction and Maintenance, Organogenesis and Somatic Embryogenesis, Plant Growth Regulation, Data Documentation

Other Skills:

- Microsoft Office: Word, Excel, PowerPoint
- Content/Poster creation
- Bio render (Scientific Illustrations)

Achievements:

- Second Rank In Brainy Bowl (Quiz) competition of LINGUA FEST organized by the Department of English, Faculty of Humanities and Social Sciences, Atmiya University on 21st March, 2024.
- Second Rank in Quiz Competition of Atmiya Avsar-Saptadharma-2023 (Arts & Culture fest).

Trainings:

- Certificate for participating in the six weeks summer school on “Managing Research Effectively” organized by the Center for Research, Innovation and Translation & the Department of Biotechnology, Atmiya University, Rajkot from 12 June to 15 July 2023
- Certificate By Hands on Training Program On Transgenic Plant Tissue Culture By Gujarat Biotechnology Research Center (GBRC) & Anand Agriculture University (AAU) Sponsored By Gujarat State Biotechnology Mission (GSBTM) Year - 2023.
- Certificate By Successfully Completed 8 Day Of Hands On Training Workshop On "Plant Biotechnology & Analytical Techniques" Sep – 2021 Organize by Department of Biotechnology, Atmiya University, Rajkot.

Course:

- NPTEL Online Certification Gov. India for Successfully Completing Course Cell Culture Technologies.
- Completed courses on the **Coursera** Platform during my B.Sc. and M.Sc. are listed in following table:

Sr. No.	Course - MOOCs	Offering University/ Organization	Credential ID
1.	Industrial Biotechnology	University Of Manchester	H66QT39LPDA7
2.	Algae Biotechnology	University of California San Diego	CCR4BV2V3PXD
3.	Introduction to Industrial Bioprocess Development	Technical University of Denmark (DTU)	4JHWQZNS2LFM
4.	The Science of Stem Cells	American Museum of Natural History	UQMCALFPD2PP
5.	Antimicrobial resistance - theory and methods	Technical University of Denmark (DTU)	4GMFWQY9PTAW
6.	Writing in the Sciences	Stanford University	VMFHMBDCDM2Q

Other Achievements:

- **M.Sc Dissertation work** - Published article in Gujarat Local News in Chakravat on 28 April 2024.
- **M.Sc Dissertation work** - Published article In Gujarat Local News in Kamalsuvas on 24 April 2024.
- A Participated in National Conference on Environmental Microbiology and Regulatory Aspects Organized by Department of Microbiology, Atmiya University, Rajkot
- A Participated in Poster Presentation Detailed Study of Omicron Infection: Origin, Classification, Epidemiology, variants, Theranostics and Post-Infection Symptoms National Conference on Environmental Microbiology and Regulatory Aspects.
- Certificate to Vigorous Participation in the Competition Entitled Debate - Feb 2022 By Faculty Of Business & Commerce Atmiya University Rajkot And Association With Lincoln University College (Malaysia)
- Certificate By Attended 3 Day Workshop Of: YOUNG CEO PROGRAM” Atmiya University, Rajkot From Aug-2022
- Certificate By Studying in Biotechnology for Meritorious Performance in Skit Events of "ATMIYA AVSAR" Art and Cultural Festival-2019

Declaration:

I, hereby, declare that all the information furnished above is true to the best of my knowledge and belief.

Sincerely
Mohammadsakil Badi

References:

(1)Dr. Chandrajit Lahiri

Professor Coordinator (Research Committee)

Department of Biotechnology

Atmiya University – Rajkot

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(2)Dr. Nutan Prakash

Associate Professor (Head of Department)

Department of Biotechnology

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(3)Dr. Debashis Banerjee

Assistant Professor (M.Sc Dissertation Guide)

Department of Biotechnology

Atmiya University – Rajkot

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