Anushka Adhav

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Professional Summary

First Class Honor's MSc Biotechnology graduate with a prior First-Class Honor's BSc in Biotechnology with strong laboratory, analytical, and research skills. Hands-on experience as a Postgraduate Researcher. Experienced in marine biotechnology, microbial cultivation, HPLC, FRAP, UV-Vis spectroscopy, and molecular biology techniques such as PCR and DNA extraction. Proficient in Python, R, and Excel for data analysis and visualization, with a proven commitment to quality control, experimental precision, and biotechnological innovation.

Education

MSc in Biotechnology **(First class honor's**)– University of Galway **2024-2025**

BSc in Biotechnology (**First class honor's**) – University of Pune **2021-2024**

Work Experience

- **Post-graduate researcher (June 2025- September 2025)**
    1. Conducted an independent MSc research project on marine algal-fungal interactions to assess their impact on bioactive metabolite production and diversity.
    2. Utilized HPLC, FRAP, and UV-Vis spectroscopy for metabolite profiling and antioxidant activity analysis.
    3. Performed molecular identification of marine fungal isolates using DNA extraction and PCR techniques.
    4. Applied Python, R, and Excel for data analysis, visualization, and interpretation of experimental results.
    5. Implemented and maintained strict adherence to Good Laboratory Practice (GLP), ensuring accuracy, reproducibility, and compliance with safety and quality standards.
    6. Collaborated within multidisciplinary research team to integrate biochemical, microbiological, and molecular approaches for understanding microbial symbiosis and bioactive potential.
    7. Contributed to advancing knowledge in marine biotechnology and natural product discovery with applications in pharmaceutical and environmental innovation.
    8. Produced a First-class MSc thesis, demonstrating high-level competency in experimental design, scientific writing, and critical data interpretation.
    9. Presented research findings at the Irish Fungal Society event held at Trinity College

Dublin, effectively communicating project objectives and outcomes to a scientific audience.

- **Graphic Design and Branding Assistant (January 2025- August 2025)**
    1. Collaborated on the branding and marketing of All in One Solutions, a startup providing industrial materials, hardware, and engineering products.
    2. Designed and developed company brochure, business visiting cards, and custom digital templates for promotional use.
    3. Assisted in creating visual identity materials that highlighted the company's motto, "Quality Always, Service Forever", and enhanced its market presentation.
    4. Applied principles of graphic design, layout composition, and content organization to ensure professional branding consistency.
    5. Supported the startup's outreach by producing visually engaging materials aligned with its business philosophy and service offerings.

- **Graduate Teaching Assistant - Modern College of Science (2023- 2024)**
    1. Supervised student laboratory sessions with a focus on GLP compliance and the safe handling of biological specimens.
    2. Instructed and supported 40+ students in identifying experimental errors and ensuring data accuracy and reproducibility.
    3. Assessed laboratory reports and assignments while providing constructive feedback on analytical precision and scientific documentation.
    4. Partnered with senior academic staff to design evaluation rubrics that emphasized data reliability, quality assurance, and good scientific practice.

Qualifications & Skills

1. Six Sigma (CSSC Certified – White Belt): Applied DMAIC and 5S methodologies for process improvement.
2. Quality Management Systems (QMS): Skilled in document control, audit procedures, and non-conformance management.
3. GMP & GLP Compliance: Experienced in maintaining traceability, reproducibility, and data integrity.
4. ISO Standards: Certified in ISO 13485, ISO 14971, and ISO 9001; familiar with risk management and audits.
5. Analytical Techniques: HPLC, UV–Vis, FRAP, Chromatography, Metabolite Extraction.
6. Molecular Techniques: DNA extraction, PCR, microbial isolation, phylogenetic identification.
7. Programming & Data Analysis: Python, R, Excel (macros, pivot tables, visualization).
8. Software & Design: SolidWorks, AutoCAD, Canva, Adobe tools.
9. Technical Writing: Scientific documentation and regulatory reporting.

Certifications & Compliance Training

1. Fire Marshal Training, University of Galway- April 2025 (Valid until April 2028)
2. Managing Health and Safety in Healthcare: Biological Agent Hazards, HSA- April 2025
3. Chemical Safety in the Workplace (Introductory), HSA- April 2025

4. Chemical Safety in the Workplace – Level 2, HAS- April 2025
5. Health and Social Care: Legislation and Risk Assessment, HSA- April 2025

Technical Skills

Analytical Techniques: High-Performance Liquid Chromatography (HPLC), UV-Vis spectroscopy, FRAP assay, and spectral scanning for metabolite profiling and antioxidant analysis.

Molecular Biology: DNA extraction, PCR amplification, agarose gel electrophoresis, and phylogenetic identification of microbial isolates.

Microbial Cultivation: Isolation, maintenance, and co-culturing of marine fungal strains from *Halidrys siliquosa* and *Corallina officinalis*; optimization of growth parameters for bioactive production.

Data Analysis & Visualization: Skilled in Python, R, and Excel for statistical analysis, trend evaluation, and graphical data presentation.

Quality & Laboratory Standards: Proficient in GLP, GMP, QMS documentation, and ISO 13485 / 14971 / 9001 frameworks; experienced in risk assessment and quality control procedures.

Scientific Communication: Strong ability in technical writing, thesis preparation, data interpretation, and presentation of research findings.

Creative & Digital Tools: Experienced with Canva, MS Office Suite, and basic graphic design for research posters, brochures, and scientific materials.

Soft Skills

Leadership: Served as Class Representative for both BSc and MSc cohorts, coordinating communication between 100+ students and faculty.

Communication: Developed through teaching, tutoring, and public STEM outreach; able to explain complex concepts with clarity and precision.

Analytical Problem-Solving: Adapted and optimized research protocols, improving experimental reproducibility and data quality.

Process Improvement: Applied Six Sigma and 5S principles in both academic and industrial settings to enhance efficiency and compliance.

Creativity & Initiative: Participant in Medtronic Hackathon and the Ideas Lab start-up incubator, demonstrating innovation under pressure.

Time Management: Balanced full-time postgraduate study, research, and Medtronic employment with zero missed deadlines.