

PROFESSIONAL SUMMARY

Microbiology Master's graduate from IPB University (GPA 3.90/4.00) who has delivered 76+ characterized bacterial and fungal isolates across four independent studies and a first-author manuscript on endophytic bacterial metabolite profiling, currently under review in a SINTA 2-indexed journal. Track record of taking research from experimental design through molecular characterization (LC-HRMS, MEGA 11, MZmine), data analysis, and scientific reporting, translating complex analytical data into clear, actionable conclusions. Experienced mentoring peers in advanced laboratory techniques and managing multiple concurrent research timelines under time and resource constraints. Adaptable and detail-oriented, seeking to bring strong analytical and laboratory technical skills to a professional environment.

EDUCATION

Master of Microbiology | IPB University | GPA 3.90/4.00

2024 – 2026

Thesis research : Antioxidant Activity & Secondary Metabolite Characterization of Endophytic Bacteria from *Hoya diversifolia*

Focus : Microbiology, Biochemistry, Phytochemistry, Bioprospecting

WORK & PROJECT RESEARCH EXPERIENCE

Thesis Research Endophytic Bacteria Isolation & Bioactivity Screening - Delivered 16 taxonomically identified bacterial isolates from 2 plant species, generating novel bioactivity data on an understudied host plant (<i>Hoya diversifolia</i>), by independently designing and executing an 8-month isolation-to-characterization research pipeline including pathogen screening and DPPH antioxidant assays. - Established confirmed taxonomic identity for all isolates through 16S rRNA sequencing and phylogenetic analysis (MEGA 11). - Produced first-author manuscript findings on bioactive secondary metabolites, currently under review in a SINTA 2-indexed journal, through LC-HRMS-based metabolite profiling and MZmine annotation. - Owned the complete research lifecycle end-to-end — design, resource planning, execution, analysis, and reporting — demonstrating strong independent project ownership.	IPB University August 2025 – March 2026
Mycology Project <i>Trichoderma</i> Diversity & Cellulase Degradation Study - Confirmed species-level <i>Trichoderma</i> diversity across a mining-impacted site (Martabe Gold Mine) by molecularly identifying 60 isolated strains, co-leading a field-to-lab initiative built on a 6-site sampling strategy designed to capture strain variability. - Generated cellulase activity data with direct application potential for organic waste degradation, contributing findings toward sustainable waste management solutions.	IPB University January 2025 – July 2025
Prokaryotic Project Plasmid Transformation & Lactic Acid Bacteria Isolation - Converted pineapple peel agricultural waste into a viable lactic acid bacteria research resource, confirming strain reliability for downstream identification through CaCO3 degradation testing and Gram staining. - Successfully transformed host bacteria with antibiotic-resistance plasmids by executing full molecular cloning workflows.	IPB University January 2025 – May 2025
Applied Microbiology Project Antibiotic & Citric Acid-Producing Bacteria Screening Identified top-performing candidate strains with dual antibiotic- and citric acid-producing potential, informing recommendations for further application-focused research, through comparative enzymatic assays (cellulase, amylase) and IAA quantification.	IPB University January 2025 – June 2025
Biology Tutor SNBT Preparation Program Guided multiple students to acceptance into public universities (PTN), achieving a strong success rate, through structured lesson plans and practice materials aligned with national entrance exam (SNBT) requirements.	Sanedu August 2022 – February 2023

TECHNICAL SKILLS

Laboratory Techniques & Methods
Bacterial & Fungal Isolation, Culturing, and Identification • Aseptic Technique • 16S rRNA Sequencing & Molecular Identification • Phylogenetic Analysis (MEGA 11) • DPPH Assay (Antioxidant Activity Testing) • Enzymatic Activity Assays (Cellulase, Amylase) • Enzyme Semi-Purification • Gram Staining • Plasmid Transformation & Molecular Cloning • IAA (Indole-3-Acetic Acid) Quantification • Bacterial Growth Curve Construction • Leveraged AI tools to accelerate literature review and support data interpretation, improving research efficiency under tight project timelines • Molecular Docking (Protein-Ligand) — foundational exposure, actively developing skills to support bioactive compound characterization

Analytical Instruments & Software
LC-HRMS (Liquid Chromatography-High Resolution Mass Spectrometry) • MZmine (Metabolite Annotation) • MEGA 11 (Phylogenetic Software) • Microsoft Excel (Data Analysis) • Microsoft Word • Canva • Gene Studio • Pymol • AutoDock Tools

Research & Documentation
Experimental Design & Method Development • Scientific Report Writing • Data Interpretation & Comparative Analysis • Good Laboratory Practice (GLP) Principles

LEADERSHIP & COLLABORATION

Peer Mentoring – Laboratory Techniques - Enabled peers to independently perform bacterial metabolite extraction and downstream data processing for lactic acid bacteria research through hands-on mentoring. - Guided peers through DNA extraction, 16S rRNA amplification, phylogenetic tree construction, and enzyme semi-purification techniques. - Supported peers in constructing bacterial growth standard curves for quantitative microbiology applications.	IPB University
Kampus Mengajar Program - Built scientific literacy among middle school students by delivering microbiology-based lessons on beneficial and harmful microorganisms in daily life. - Simplified complex microbiological concepts into relatable examples, such as the role of probiotics in skin and digestive health, to boost student engagement.	Ministry of Education
Interdisciplinary Scientific Discussion Group - Refined research analysis and interpretation by presenting findings to students from multiple graduate programs and incorporating constructive feedback. - Broadened methodological perspective through cross-disciplinary discussions on research approaches and problem solving.	IPB University

ADDITIONAL INFORMATION

English Proficiency: TOEFL ITP 510