



NADA AHMAD RAYHAN

Bachelor of Science in Biology

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SUMMARY

Biology graduate with hands-on experience in microbiology and environmental laboratory testing, including sample preparation, microbial analysis, and SOP-based workflows in compliance with ISO 17025. Currently involved in an environmental laboratory internship, supporting microbiological testing of food, beverage, and water samples, along with accurate documentation, media preparation, and equipment maintenance under quality-controlled and biosafety standards. Demonstrates strong attention to detail, data integrity, and consistency in laboratory workflows, with a strong interest in applied microbiological testing.

EDUCATION

DIPONEGORO UNIVERSITY (2021-2025)

GPA (present) 3.81/4.0

Graduated with a thesis titled “The Effect of Umbilical Cord-Mesenchymal Stem Cell (UC-MSC) Secretome on IL-6 Levels and Liver Histological Structure in Type II Diabetic Rats”

PROJECT AND RESEARCH EXPERIENCE

Microbiological Testing and Environmental Sampling and Internship

at PT. Graha Mutu Persada

(December 2025 – Now)

- Conducted microbiological testing on 40+ environmental and food samples, primarily food and beverage analysis (formalin, borax, and microbial parameters) and water testing (drinking and clean water) including *E. coli* and Total Plate Count (TPC) under SOP and biosafety standards. Also performed field sampling, sample preparation, and laboratory documentation while ensuring data accuracy, traceability, and compliance with quality control procedures.

Histopathological Evaluation of Microplastic-Induced Tissue Damage in Tilapia and Milkfish

(November 2025)

- Assisted in histopathological analysis of microplastic exposure by documenting and evaluating 42 fish liver and intestine tissue slides using light microscopy and Optilab imaging. Performed SOP-based slide assessment, structured data recording, and comparative analysis, strengthening accuracy, attention to detail, and consistency in multi-step laboratory workflows.

Microplastic Identification in Commercial and Aquaculture Fish Using Digested Tissue Analysis

(August 2025 – November 2025)

- Analyzed 55 multi-organ fish tissue samples using standardized workflows (drying, chemical digestion, vacuum filtration, and stereo microscopy) to identify and classify microplastic particles. This project strengthened my precision in multi-step laboratory processes, structured evaluation, and clear data reporting, competencies transferable to formulation testing, prototype development, and panel-style assessments in R&D environments.

Biomedical Researcher at PT. SCCR Indonesia –

Cell Culture, Animal Models, and Histology

(January 2025 – August 2025)

- Conducted a seven-month biomedical study on SUC-MSCs in diabetic rat models, performing aseptic cell culture, ELISA, and histopathology under SOPs while analyzing biomarker

trends, strengthening skills in sterile workflow, data interpretation, and quality-controlled laboratory testing.

Molecular Docking-Based Evaluation of the Therapeutic Potential of “Jamu Kencing Manis Madura” on Pancreatic Beta-Cell Recovery in Diabetes Mellitus

(September 2024 – May 2025)

- Performed molecular docking of phytochemical compounds against the PPAR γ receptor using AutoDock Tools, PyRx, and BIOVIA Discovery Studio, identifying eupafolin as a potential antidiabetic candidate and developing skills in bioinformatics, compound screening, and in silico analysis.

Laboratory Assistant of Animal Anatomy Course

(August 2023 - November 2023)

- Supported Animal Anatomy laboratory sessions by demonstrating techniques, assisting students during hands-on activities, and reviewing practicum reports, while collaborating with instructors in assessment and evaluation, strengthening clear scientific communication and structured laboratory guidance skills.

ACHIEVEMENT

Presenter & Participant — The 14th International Seminar on New Paradigm and Innovation of Natural Sciences and Its Application (ISNPINSA)

(October 2024).

Funded Participant of the 2024 “Program Kreativitas Mahasiswa” (PKM-PM) Community Service Program

(October 2024)

Funded Participant of the Student Research Grant – Faculty of Science and Mathematics, Diponegoro University, Ministry of Education, Culture, Research, and Technology

(February 2024)

ORGANIZATION

Badan Eksekutif Mahasiswa Faculty of Sains and Mathematics, Diponegoro University (BEM FSM Undip)

Head of Pengembangan Sumber Daya Mahasiswa (PSDM) Division

(March 2024 – November 2024)

Research Incubator Center Faculty of Sains and Mathematics, Diponegoro University (RIC FSM Undip)

Vice Chief of Human Resources Development (HRD) (March 2023 - November 2023)

TRAINING

Latihan Keterampilan Manajemen tingkat Menengah, Diponegoro University (LKMM-TM Undip)

(September, 2023)

Scientific Discussion (Series 15): Studi Kekinian Etnobotani dan Kontribusinya dalam Pengelolaan Keanekaragaman Hayati

(October 2023)

Leadership Training Faculty of Sains and Mathematics, Diponegoro University (LT FSM Undip): Basic of Organization, Leadership Strategies for Effective Teamwork

(April, 2022)

SKILLS

Scientific & Technical Skills

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| - Laboratory Sample Preparation & Handling | - Data Recording, Quality Control, and Result Interpretation |
| - Pre-analytical, Analytical, and Post-analytical Procedures | - Aseptic Technique & Sterile Handling |
| - Biomarker Analysis (IL-6 ELISA) | - Molecular analysis & docking |
| - Microbiological Testing | - Instrument Operation |

Leadership & Communication

- Public Speaking & Scientific Presentations
- Program Coordination
- Analytical Problem-Solving & Evidence-Based Decision Making
- Strategic Planning

Laboratory Compliance & Safety

- SOP-Driven Workflow Execution
 - Laboratory Cleanliness & Equipment Care (ISO 17025 Awareness)
 - Accuracy, Precision, and Quality-Controlled Testing
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