

ABOUT ME

I am a Bioinformatics graduate with experience in genome-scale metabolic modeling and microbial community analysis. My skill set includes multi-omics data integration, as well as the application of machine learning and deep learning methods to answer biological questions. I have a particular interest in exploring microbiomes, both in the context of human health and ecological systems, with the goal of uncovering insights that can guide scientific and practical applications.

EDUCATION

Master of Science (MSc) in Bioinformatics Wageningen University & Research, Netherlands GPA: 8.256 / 10 Courses: Computational Biology, Programming in Python, Advanced Bioinformatics, Advanced Statistics, Molecular System Biology, Machine Learning, Deep Learning	<i>2023 - 2025</i>
Bachelor of Science (BSc) in Biology Institut Teknologi Bandung, Indonesia GPA: 3.62 / 4 Courses: Cell & Molecular Biology, Evolution, Synthetic Biology, Molecular Phylogenetics, Genomics & Proteomics, Microbiology	<i>2014 - 2018</i>

THESIS & INTERNSHIPS

MSc Internship Wetsus, Leeuwarden, Netherlands Project title: Linking Microbial Community Structure and Composition to Polyhydroxyalkanoate (PHA) Production Potential in Waste-Activated Sludge Supervisor: Dr. Pieter van Veelen & Dr. JJ (Jasper) Koehorst Grade: 8.5/10	<i>April - August 2025</i>
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MSc Thesis System & Synthetic Biology chair group, WUR Thesis title: Reconstruction and Analysis of <i>Flavonifractor plautii</i> Genome-Scale Model: Unveiling Its Contribution to Short-Chain Fatty Acids Production in the Gut Microbiome Supervisor: Dr. William T. Scott Jr. Grade: 8.5/10	<i>September 2024 - March 2025</i>
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BSc Thesis Genetics and Molecular Biotechnology chair group, ITB Thesis title: Cloning and Sequence Analysis of Chitin Synthase B (CHSB) Gene as an RNAi Target for Nettle Caterpillar Pest Control Method (<i>Darna trimma</i> Moore & <i>Setora nitens</i> Walker) Supervisor: Dr. Adi Pancoro Grade: 4 / 4	<i>February - August 2018</i>
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BSc Internship
Microbiology Laboratory,
Health Laboratory of West Java Province, Indonesia
Project title:
Microbial analysis on samples from food poisoning case in Bandung, Indonesia
Grade: 3.5 / 4

July – August 2017

WORK EXPERIENCE

Quality Assurance Officer *February – June 2023*
Production of leather-like material from microbial cellulose
PT Kurva Lonceng Khatulistiwa, Bandung, Indonesia
• Developed and maintained company's documentation including manuals, procedures, and work instructions.
• Ensured the company complied with certification requirements, including B-Corp and BioPreferred USDA.

COVID-19 Testing Laboratory Supervisor *February 2021 – June 2022*
PT Kartika Bina Medikatama, Sumbawa, Indonesia
• Oversaw daily laboratory operations, ensuring efficiency and compliance with protocols.
• Mentored and trained Laboratory Analysts, assigning tasks and providing guidance.
• Verified and delivered accurate laboratory analysis reports promptly.

COVID-19 Testing Laboratory Analyst *August 2020 – January 2021*
PT Kartika Bina Medikatama, Sumbawa, Indonesia
• Conducted COVID-19 testing, including RNA isolation and RT-PCR, processing up to 300 samples daily.

Molecular Biology and Cell Culture Laboratory Analyst *December 2019 – March 2020*
PT Aretha Medika Utama, Bandung, Indonesia
• Ensured the quality and availability of stem cell and microbial culture collections.
• Performed research using ELISA, PCR, flow cytometry, and MIC/MBC analysis.
• Compiled research data and contributed to report writing and scientific publications.

Research Assistant *January – May 2019*
Dengue Surveillance Project, School of Life Science and Technology, ITB
• Assisted research activities in monitoring mosquito population dynamics (including samples collection, mosquito rearing & identification, and data analysis)

SKILLS

Programming and tools Python; R; Bash; Git; Snakemake; Docker; HPC environments; version control systems.

Bioinformatics & data analysis Omics data analysis; genome-scale metabolic modeling; workflow automation; microbial community analysis; phylogenetics; biostatistics; machine learning; deep learning.

Languages Bahasa Indonesia (native); English (IELTS 7.5 overall).

Soft skills Critical thinking and problem-solving; interdisciplinary teamwork; self-motivation; adaptability and eagerness to learn.

PUBLICATIONS

2020 Kusuma, H. S. W., Widowati, W., Gunanegara, R. F., Juliandi, B., Lister, N. E., Arumwardana, S., Yusepany, D. T., Artie, D. S., **Nataya, E. D.**, Gunawan, K. Y., Sholihah, I. A., Girsang, E., Ginting, C. N., Bachtiar, I., & Murti, H. (2020). *Effect of conditioned medium from IGF1-induced human Wharton's jelly mesenchymal stem cells on osteoarthritis*. *Avicenna Journal of Medical Biotechnology*, 12(3), 172-178. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7368112/>.

2020 Lister, I. N. E., Ginting, C. N., Girsang, E., **Nataya, E. D.**, Azizah, A. M., & Widowati, W. (2020). Hepatoprotective properties of red betel (*Piper crocatum* Ruiz and Pav) leaves extract towards H₂O₂-induced HepG2 cells via anti-inflammatory, antinecrotic, antioxidant potency. *Saudi Pharmaceutical Journal*, 28(10), 1182-1189. <https://doi.org/10.1016/j.jsps.2020.08.007>.

2019 Amalia, C., Irfani, A., **Nataya, E. D.**, Susanto, G. G., Putra, P. J., Lestari, S. G., & Taufik, I. (2019). Sweet potato (*Ipomoea batatas* L.) based microbial cellulose as advanced biomaterial for sustainable leather production. *Suranaree Journal of Science and Technology*, 26(1), 78-83. <https://ird.sut.ac.th/e-journal/Journal/pdf/190101546.pdf>.