

YAFI SURYA PERMANA

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Dedicated and innovative researcher with 3 years of experience in drug delivery system. Proficient in conducting thorough literature reviews, designing experiments, and analyzing data to advance scientific understanding and address clinical needs. Demonstrated ability to collaborate effectively with interdisciplinary teams and translate research findings into impactful solutions for medical applications.

EDUCATION

Universitas Gadjah Mada

Apothecary/Professional Pharmacist program

Aug 2023 – Aug 2024

Gained hands-on experience across pharmaceutical manufacturing, hospital, community, and public health pharmacy settings through internships in institutions below:

- PT Kalbe Farma (Oct – Nov 2023)
- Dr. Sardjito General Hospital (Dec 2023 – Jan 2024)
- Apotek Garsen (Feb – Mar 2024)
- Pandak I Public Health Center (Mar – Apr 2024)

GPA: 4.00/4.00

Korea Advanced Institute of Science and Technology (KAIST)

MS degree in Bio and Brain Engineering

Aug 2021 – Aug 2023

Specialized in drug delivery and nanomedicine, with research focused on mRNA therapeutics. Contributed to lab projects involving lipid nanoparticle formulation and characterization for nucleic acid delivery. Mentored undergraduate students in laboratory techniques, experimental design, and data analysis.

Completed master's thesis titled "Ganglioside-incorporating Lipid Nanoparticles as a Polyethylene Glycol-free mRNA Delivery Platform" — developed a novel, less-immunogenic delivery system using naturally derived molecules.

GPA: 3.98/4.30

Universitas Gadjah Mada

B. Pharm degree in Pharmacy

Aug 2017 – May 2021

Served as a laboratory assistant for undergraduate courses, including:

- Analytical Chemistry I (Volumetric Analysis, Spring 2019 & 2020)
- Analytical Chemistry II (Instrumental Analysis, Fall 2019)
- Biopharmaceutics (Fall 2020)

Completed undergraduate thesis titled "Narrative Review: Identification and Quantification of Organic Impurities in Analgesic Drug Products by High Performance Liquid Chromatography (HPLC) with Ultraviolet-Visible (UV-Vis) and Photodiode-Array (PDA) Detectors".

GPA: 3.92/4.00

EXPERIENCE

Jr. Technology Development Scientist (Full-time)

PT. Kalbe Farma, Tbk., Bekasi, Indonesia

Aug 2024 – Present

Supporting new pharmaceutical product development by integrating scientific research with cross-functional collaboration and regulatory alignment. Key responsibilities:

- Developed product assessments and research strategies guided by Quality by Design (QbD) methodology.
- Designed and executed laboratory-scale studies, followed by comprehensive analysis and reporting of trial results to guide formulation refinement.
- Coordinated with cross-functional teams including Production, Quality Assurance, and Technical Services to initiate scale-up studies.
- Prepared detailed technical documentation for scale-up and pilot production processes, including prototype formulations, drug product specifications, validation process protocols, and master processing instructions.
- Performed in vitro–in vivo correlation (IVIVC) modelling to predict pharmacokinetic profiles of the developed drug product.
- Collaborated with a Contract Research Organizations (CRO) for planning and execution of bioequivalence studies.

Graduate Research Assistant (Full-time)

KAIST Institutes for Health Science and Technology (KIHST), Daejeon, Republic of Korea

Aug 2021 – Aug 2023

Conducted research on mRNA delivery system under Prof. Ji-Ho Park. Key responsibilities:

- Spearheaded a collaborative research project with De Novo Biotherapeutics focused on developing bio-derived lipid nanoparticles (LNPs) for low-immunogenic mRNA delivery.
- Conducted molecular and cellular biology experiments spanning bacterial transformation, pDNA preparation, and in vitro transcription (IVT) mRNA production.
- Formulated and characterized LNPs; evaluated their efficacy through in vitro and in vivo assays, analyzed using in vivo imaging systems, confocal microscopy, and flow cytometry.

Chemistry Instructor (Freelance)

Komunitas Olimpiade Jogja (KOJA, Yogyakarta Olympiad Community), Yogyakarta, Indonesia

Jun 2018 – Jun 2021

- Served as part of the core instructor team, delivering advanced chemistry lessons and mentoring students across Yogyakarta and Central Java for Indonesia's national chemistry competitions.
- Actively contributed to the Division of Student Affairs, organizing webinars and outreach programs to motivate and prepare students for competitive participation.

PUBLICATION

Yafi S. Permana, Mincheol Jang, Kyunghwan Yeom, Erinn Fagan, Yong J. Kim, Joon H. Choi, Ji-Ho Park, "Ganglioside-incorporating lipid nanoparticles as a polyethylene glycol-free mRNA delivery platform", *Biomaterials Science*, 2025.

Nadia Yasmine, Enrique Aldrin, **Yafi S. Permana**, Arta Farmawati, "The Potency of Iron-Fortified Klutuk Banana and Lactobacillus as Functional Food to Treat Anemia", *Jurnal Dunia Gizi*, 2022.

Yustika Sari, Roihan M. Iqbal, **Yafi S. Permana**, Ananta W. Raihan, Lisna Hidayati, "In silico molecular docking of marchantins and tumor necrosis factor receptor superfamily members 6 for apoptosis agonist activity", *Research Journal of Biotechnology*, 2021.

Dhuriyatun Khasanah, **Yafi S. Permana**, Ave Rahman, Putu T. Saraswati, "Nephroprotective activity of fingerroot (*Boesenbergia pandurata*) extract against cisplatin-induced nephrotoxicity in mice : molecular, biochemical, and histopathological approach", *Journal of Asian Medical Students' Association*, 2020.

HONORS & AWARDS

Awardee of the Kalbe Pharmaceutical Manufacturing Award

Issued by PT. Kalbe Farma, Tbk.

Sep 2024

Silver Medalist on International Genetically Engineered Machine (iGEM) Competition 2021

Issued by iGEM foundation

Nov 2021

Bronze Medalist of Presentation on Research Program, PIMNAS 33

Issued by Indonesian Ministry of Education and Culture

Nov 2020

1st Winner of Chemistry on Student National Olympiad (OSM) MIPA EXPO XIV

Issued by Faculty of Mathematics and Natural Science at Riau University, Indonesia

Feb 2020

2nd Winner of Research Paper and Poster on INAMSC 2019

Issued by Faculty of Medicine at Universitas Indonesia

Aug 2019

Gold Medalist of Chemistry on National Olympiad (ONMIPA-PT)

Issued by Indonesian Ministry of Research, Technology, and Higher Education

May 2018

2nd Winner of Chemistry on National Olympiad (OSN DIKPORA DIY) 2017

Issued by Sports and Education Service Office (Dinas DIKPORA) of Special Region of Yogyakarta, Indonesia

Oct 2017

VOLUNTEERING**Chemistry Instructor**

Education | SahabatKSN Berbagi

Jul 2020

Instructed high-school students for national chemistry competition. The collected registration fee was donated to COVID-19 Pandemic Response.

Facilitator

Freshman Orientation | PPSMB Papyrus, Universitas Gadjah Mada, Yogyakarta, Indonesia

May 2019 – Aug 2019

Assisted the freshmen on the orientation program of Pharmacy UGM.

Granted Community Service

Education | Program Kreativitas Mahasiswa (PKM)

Apr 2019 – Jul 2019

Instructed students at Rumah Sajada Boarding School for the plantation and commercialization of medicinal herbs. The program was funded by the Indonesian Ministry of Research, Technology, and Higher Education.

Chemistry Instructor

Education | Bimbingan Antar Teman Yogyakarta

Jan 2018 – May 2018

Instructed high-school students for the Indonesian scholastic assessment test (SBMPTN). The program was an on-site fee waiver to help students in need.

LANGUAGES**Indonesia**

Native proficiency

English

IELTS: 7.5 (Mar 2023)

ADDITIONAL**Laboratory skills**

Solid dosage unit formulation | Lipid nanoparticle formulation | DLS particle characterization | RiboGreen encapsulation efficiency measurement | pDNA extraction and linearization | RNA in vitro transcription and purification | Mammalian cell culture | In vitro & in vivo luciferase assay | In vivo imaging system (IVIS) | In vitro flowcytometry | FlowJo software | Confocal microscopy | PLANTS molecular docking | In Vitro-In Vivo Correlation (IVIVC) modelling