

## Personal Information

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## Biosketch

Dr. Pujiati is a faculty member and researcher in biology education with expertise in microbiology and biotechnology. Her research focuses on microbial-based technologies for biogas production, biofertilizers, and integrated waste management in agricultural and livestock systems. She has led numerous research and community engagement projects related to cellulolytic fungi, bioenergy, and sustainable agriculture. Dr. Pujiati actively integrates research outcomes into case-based and problem-based learning to support applied life sciences education. Her work emphasizes the implementation of green economy principles through interdisciplinary collaboration, education, and community-based innovation.

## A. Educational Background

Degree	University	Country	Field of Study	Year Graduated
Bachelor	Universitas Airlangga	Indonesia	Biology (Microbiology)	2009
Master	Universitas Airlangga	Indonesia	Biology (Microbiology)	2011
Doctoral	Universitas Airlangga	Indonesia	Science and Technology (Microbiology)	2025

## B. Community Engagement and Outreach

No	Experience	Institution	Role	Year
1	Village Development Program: "Application of Cellulolytic Fungi in Integrated Biogas, Biocompost, and Biofertilizer Production"	UNIPMA-Magetan	Project Leader	2020–2022
2	Community Service: "Training on Biofertilizer Production for Farmers Group Harapan, Dusun Gemarang"	UNIPMA-Madiun	Project Leader	2022
3	Appropriate Technology to Improve Agricultural and Livestock Sectors with Foster Partners (Farmer Group: Mulyosejati), Puntukdoro	UNIPMA-NEUST Philippines	Project Leader	2022
4	Microbial Technology for Village Development: Processing Agricultural and Livestock Waste into Biogas and Quality Compost	UNIPMA-Magetan	Project Leader	2022

5.	Integrated Waste Management Systems in Dairy Cattle Production Centers for Green Economy Implementation	UNIPMA	Project Leader	2025
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### C. Selected Research and Collaboration

No	Title	Funding Source	Role	Year
1	Isolation, Identification, and Potential Test of Cellulolytic Fungi from Jati Kresek Forest Soil, Madiun	LPPM	Leader	2013
2	Cellulase Enzyme Production from Cellulolytic Fungi Isolated from Jati Kresek Forest Soil, Madiun	DIKTI	Leader	2014
3	Cellulase Enzyme Production and Project Based Learning Application in Applied Biology Course	DIKTI	Leader	2016
4	Purification and Characterization of Cellulase Enzyme from <i>Aspergillus niger</i> Isolated from Jati Forest Soil, Madiun	DIKTI	Leader	2017
5	Production, Purification, and Characterization of Cellulase Enzyme from <i>Trichoderma viride</i> and Its Application in Bioscouring	DRTPM-ITS	Co-Investigator	2019
6	Optimization of Biogas Production Using Cellulolytic Fungi Isolated from Jati Kresek Forest Soil, Madiun	DIKTI	Leader	2020
7	Potential and Interaction Patterns of Cellulolytic Fungi with Methanogenic Microorganisms in Biomass-Based Bioenergy Production	LPPM	Leader	2020

### D. Scientific Publications (Last 5 Years):

- Research-based modules on biotechnology and microbiology for high school and university students.
- Articles on cellulolytic fungi, biogas production, and biofertilizer published in national and international journals and conference proceedings.
- Books such as "Biomass-Based Biogas Production" (UNIPMA Press, 2020), "Agricultural Biotechnology: Bioslurry Compost Production" (Unipma Press, 2021), and "Microbe Observation Techniques" (UNIPMA Press, 2022).
- Recent articles include studies on biogas enhancement with *Aspergillus flavus* (Berkala Penelitian Hayati, 2023) and compost quality evaluation (AIP Conference Proceedings, 2024)

### E. Selected Patents and Intellectual Property

- "Procedure for Making and Multiplying Natural Probiotics for Fish" (2019)
- "Poster for Utilizing Agricultural and Livestock Waste for Biogas, Biocompost, and Biofertilizer Production" (2021)
- "Simple Patent: Formula of Organic Material Biodegrader from *Rhizopus* sp. for Biogas Production with Bagasse Substrate" (2022)
- "Simple Patent: Solid Fermentation Method of Pigeon Pea (*Cajanus cajan*) for Vegetable Oil Production" (2022)
- "Simple Patent: Antioxidant Activity Formulation of Genitri Seed Extract Using DPPH Method" (2022)
- Other copyrights related to educational posters and compost house design