

Staff Handbook

Name	<i>Dr. Ixora Sartika Mercuriani, S.P., M.Si</i>		
Post	<i>Biotechnology</i>		
Academic career	<i>Teaching staff</i>	<i>Dept. of Biology Education, Universitas Negeri Yogyakarta</i>	<i>2005</i>
	<i>Doctorate Degree (Plant and crop science)</i>	<i>The Graduate School of Gadjah Mada University</i>	<i>2008-2015</i>
	<i>Master Degree (Plant breeding)</i>	<i>The Graduate School of IPB University</i>	<i>1998-2004</i>
	<i>Bachelor degree (Plant breeding)</i>	<i>Agriculture Faculty, Satya Wacana Christian University</i>	<i>1991-1997</i>
Employment	Position	Employer	Period
	<i>Teaching staff (Biotechnology)</i>	<i>Ministry of Higher Education, Science, and Technology, Republic of Indonesia</i>	<i>2005-now</i>
Research and development projects over the last 5 years	Year	Topic	Funding
			Source
			Amount (Rp.)
	Research Experiences		
	2020	<i>Functional gene cloning of lactic acid bacteria (LAB)</i>	<i>Universitas Negeri Yogyakarta</i>
	2021	<i>Sequence analysis and cloning of lactate dehydrogenase (LDH) genes from various lactic acid bacteria isolates</i>	<i>Universitas Negeri Yogyakarta</i>
	2021	<i>Propagation of orchid plants through axillary shoot induction in vitro and analysis of their genetic uniformity</i>	<i>Universitas Negeri Yogyakarta</i>
	2022	<i>Genetic diversity of the <i>Dendrobium antennatum</i> orchid and its potential as a raw material for medicines/health supplements</i>	<i>FMIPA UNY</i>
	2022	<i>Conservation of tropical wild orchids in Yogyakarta Karst Mountains through empowering local farmers</i>	<i>Australian Centre for International Agricultural Research (ACIAR)</i>
	2023	<i>Pengembangan Multimedia Interaktif Berbasis Website Pada Materi Virus Untuk Meningkatkan Kemampuan Berfikir Kritis Dan Minat Belajar Siswa Kelas X SMA</i>	<i>Universitas Negeri Yogyakarta</i>

	2023	<i>Biostimulation of Elicitors in In Vitro Culture Medium of Dendrobium antennatum to Increase the Content of Secondary Metabolites as Antioxidant and Antiglycation Agents.</i>	<i>Universitas Negeri Yogyakarta</i>	<i>50.000.000</i>
	2023	<i>Antimicrobial Activity of Dendrobium antennatum Ethanol Extract Grown in in vitro culture medium with the addition of Chitin and Cellulose Elicitors.</i>	<i>Universitas Negeri Yogyakarta</i>	<i>40.000.000</i>
	2023	<i>Mechanism of Secondary Metabolite Production Pathways by Chitin and Cellulose Elysation in In Vitro Culture of Dendrobium antennatum.</i>	<i>Universitas Negeri Yogyakarta</i>	<i>40.000.000</i>
	2023	<i>The Effect of Planting Media on Endophytic Bacterial Diversity and Corn Growth</i>	<i>FMIPA UNY</i>	<i>20.000.000</i>
	2023	<i>Increase in the content of secondary metabolite compounds of the orchid Dendrobiun antennatum through induction with chitosan in vitro.</i>	<i>Universitas Negeri Yogyakarta</i>	<i>18.000.000</i>
	2024	<i>Effect of Chitin and Cellulose Elisitis on In Vitro Culture on the Genetic Stability of Dendrobium antennatum Orchids Using Random Amplified Polymorphic DNA Mark.</i>	<i>Universitas Negeri Yogyakarta</i>	<i>45.000.000</i>
	2024	<i>DNA Barcoding of Hybrid Cattleya Orchid Based on Chloroplast DNA Marker.</i>	<i>Universitas Negeri Yogyakarta</i>	<i>24.000.000</i>
	2025	<i>Identification of Molecular Markers of Cattleya Orchid Flower Color Properties.</i>	<i>Universitas Negeri Yogyakarta</i>	<i>24.000.000</i>
	Community Services Experiences			
	2020	<i>Increasing Literacy On The Covid19 Virus Outbreak Programmedly To Improve Awareness and Prevention in Pleret, Bantul</i>	<i>Universitas Negeri Yogyakarta</i>	<i>6.000.000</i>
	2022	<i>Training On Producing Hybrid Orchids (Crossing And In Vitro Culture Of Crossing Results)</i>	<i>Universitas Negeri Yogyakarta</i>	<i>8.000.000</i>
	2023	<i>Introduction of orchid cultivation as an alternative to farming business of KWT Rejo Mulyo</i>	<i>Universitas Negeri Yogyakarta</i>	<i>6.000.000</i>
	2023	<i>Kyai Langgeng Park (TKL) Laboratory Recreation: a recreation and education area based on local potential</i>	<i>Kemendikbud</i>	<i>739.023.500</i>

	2024	Improving Understanding of Cell and Molecular Biology Materials for MGMP Biology Teachers Through Simple DNA Isolation Practical Work	Universitas Negeri Yogyakarta	25.000.000
	2024	Training and assistance in guidance techniques and care for Cattleya orchids	Universitas Negeri Yogyakarta	8.000.000
	2025	Empowerment of DIY Orchid Lovers in the Development of Cattleya Orchid Variants	Universitas Negeri Yogyakarta	8.000.000
	2025	Introduction to Orchids and Indonesian Culture through Batik activities	PKM Assignment of Professors and Structural Lecturers University (DRPM)	30.000.000,00
	2025	Empowerment of the Wijaya Kusuma Farmer Women's Group (KWT) in Orchid Cultivation	Community Partnership Empowerment (PKM) University (DRPM)	43.671.000,00
Industry collaborations over the last 5 years	Project title : - Partners : -			
Patents and proprietary rights	Title		Year	
	The Process of Acclimatizing Cattleya Orchids with Hanging Techniques		2025	
	Video DNA Extraction Method		2025	
Important publications over the last 5 years	International Conventions/Workshops/Seminars			
	Pedigree analysis of obesity in families of young women in Yogyakarta. (Author: Paramita Cahyaningrum Kuswandi, Tutiek Rahayu) https://doi.org/10.1063/5.0111149		2023	AIP Conference Proceedings 2556, 030005.
	Publications in International Journals			
	Identification and genetic study of lactic acid bacteria from intestine of domestic chickens (Gallus gallus domesticus)		2025	Indonesian Journal of Biotechnology
	Application of DNA barcoding for conservation of orchid species in Yogyakarta		2025	IOP Conference Series Earth and Environmental Science

	<i>Android-Based E-Module of Excretory System to Improve High School Students' Engagement</i>	2023	AIP Conference Proceedings
	<i>Fourier transform infrared spectrum pre-processing technique selection for detecting PYLCV-infected chilli plants</i>	2022	<i>Spectrochimica Acta Part A Molecular and Biomolecular Spectroscopy</i>
	<i>The Alternative Media Supporting the Protocorm and Plantlet Growth of the Indonesian Black Orchid (Coelogyne pandurata Lindl.) Grown In Vitro</i>	2022	<i>Caraka Tani Journal of Sustainable Agriculture</i>
	<i>Gas chromatography-mass spectrometry analysis of compounds emitted by pepper yellow leaf curl virus-infected chili plants: A preliminary study</i>	2021	<i>Separations</i>
	<i>Challenges towards the Implementation of ICT in Biology Learning: A Review Study</i>	2021	<i>Journal of Physics Conference Series</i>
	<i>Students' competence in cognitive process and knowledge in biology based on curriculum used in Indonesia</i>	2020	<i>International Journal of Instruction</i>
	<i>The effectiveness of experiential learning model by using mind map to the understanding of concepts on fungi materials at the tenth-grade students of senior high school</i>	2020	<i>Journal of Physics Conference Series</i>
	<i>Senior High School Biology teachers perception towards implementation of 2013 revised curriculum according to school area zone in Gunungkidul</i>	2020	<i>Journal of Physics Conference Series</i>
	Publications in National Journals		
	PENDAMPINGAN PENGOLAHAN LIMBAH ORGANIK MENJADI ECOENZYME BAGI GURU-GURU SMP SEKABUPATEN MAGELANG	2024	Jurnal Pengabdian Masyarakat MIPA dan Pendidikan MIPA 8 (2), 116-120, 2024
	Current Food and Beverage Processing for UMKM Players, Teachers and Students throughout Magelang Regency	2024	<i>Jurnal Pengabdian Multidisiplin 1 (1), 2024</i>
	Desain Primer Untuk Isolasi Gen L-LDH Berdasarkan Genom Streptococcus pluranimalium dan Aplikasinya	2024	<i>Kingdom (The Journal of Biological</i>

			<i>Studies) 10 (1), 88-103, 2024</i>
	PENGARUH KONSENTRASI KOMBINASI 2, 4-D DAN TDZ TERHADAP PERTUMBUHAN TUNAS AKSILER ANGGREK (Dendrobium Red Emperor Prince)	2024	<i>Kingdom (The Journal of Biological Studies) 10 (1), 1-13, 2024</i>
	Pendampingan pembuatan souvenir dari sampah anorganik	2024	Jurnal Pengabdian Masyarakat MIPA dan Pendidikan MIPA 8 (2), 83-88, 2024
	Development of E-Module in Problem-Based Learning (PBL) on Biotechnology Material to Increase Learning Independence and Understanding of Concepts for Class XII SMA Students	2024	Jurnal Penelitian Pendidikan IPA 10 (9), 6552-6563, 2024
	Antidiabetic Molecular Mechanisms of Active Compounds from Several Orchids	2024	Jurnal Penelitian Pendidikan IPA 9 (8), 373-386, 2023
	Development of ICT-Based teaching materials on phylogeny topic as innovations in evolution courses: a need analysis	2023	Jurnal Penelitian Pendidikan IPA 9 (1), 48-56, 2023
	Optimasi Induksi Tunas Aksiler Dendrobium nobile Melalui Kombinasi 2-iP dan 2, 4-D In Vitro	2022	AGROISTA: Jurnal Agroteknologi 7 (1), 45-53, 2023
	Optimasi Media Kultur In Vitro Anggrek Dendrobium nobile Berbasis Pupuk Dengan Penambahan Air Kelapa dan Vitamin B1	2020	Jurnal Penelitian Saintek 25 (2), 157-172, 2020
Activities in specialist bodies over the last 5 years	Organisation Role Period		
	- Pencinta Anggrek Indonesia DIY (PAI DIY) - Vice Chairman - 2019 – 2024 - Pencinta Anggrek Indonesia DIY (PAI DIY) - Chairman - 2025 – 2030		

