



DEPARTMENT OF FOOD & AGRICULTURAL PRODUCT TECHNOLOGY

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STAFF HANDBOOK

Name	Rachma Wikandari, S.T.P., M.Biotech., Ph.D.		
Post	Fungal Biotechnology in Food and Agricultural Product Applications		
Academic career	Doctoral Degree (Biotechnology)	University of Borås, Sweden	2011-2014
	Master Degree (Biotechnology)	Universitas Gadjah Mada, Indonesia	2009-2011
	Undergraduate Degree (Food and Agricultural Product Technology)	Universitas Gadjah Mada, Indonesia	2004-2008
Employment	Lecturer	Universitas Gadjah Mada	2014-present
	Head of Biotechnology Laboratory	Universitas Gadjah Mada	2022-2025
Research and development projects over the last 5 years	No	Title of Research and Development Projects	
	1	Evaluation of media for the production of probiotics based on peptone powder and halal yeast extract and its potential in producing functional extracellular components Period: 2024 Amount of Financing: 118.86 million rupiah Personnel: Tyas Utami, Rachma Wikandari , Dian Anggraini S	
	2	Physicochemical Characterization of Mycoprotein from the Fungus Rhizopus Oligosporus as Artificial Meat Material Period: 2024 Amount of Financing: 75 million rupiah Personnel: Rachma Wikandari , Ria Millati, Arima Diah S	
	3	Development of Meat Analogue from Rhizopus Oligosporus Cultivated on Food Industrial by Products as Future Sustainable Food Production Period: 2024 Amount of Financing: 1.2 billion rupiah Personnel: Rachma Wikandari , Ria Millati	
	4	Development of nuggets from thread fungus grown in soybean boiled water as a sustainable alternative protein source Period: 2023 Amount of Financing: 66.37 million rupiah Personnel: Rachma Wikandari , Arima Diah S	



	5	Improving the Texture of Artificial Meat Processes from Thread Mushrooms as A Sustainable Alternative Protein Source Period: 2023 Amount of Financing: 50 million rupiah Personnel: Rachma Wikandari	
	6	Food Processing Residues to Climate-Smart Food via Edible Filamentous Fungi Period: 2023 Amount of Financing: 1.2 billion rupiah Personnel: Rachma Wikandari	
	7	Antioxidant Potential and Color Stabilization in Wedang Uwuh Made From Spices with Copigmentation and Microencapsulation Period: 2023 Amount of Financing: 75 million rupiah Personnel: Rachma Wikandari , Umar Santoso, Sri Raharjo	
	8	Production and Commercialization of Glucomannan-based Fiber Drink Ingredients as Functional Beverage Period: 2022 Amount of Financing: 710 million rupiah Personnel: Rachma Wikandari	
	9	Superior Antifungal Peptides from Goat Milk Protein Hydrolyzate with Trypsin Enzyme Digestion and Its Application for Food Preservatives Period: 2022 Amount of Financing: 50 million rupiah Personnel: Tri Joko R, Rachma Wikandari , Winarto H	
	10	Viability of Mixed Local Isolate Culture Spores on Various Growth Media, Drying Methods, and Storage Conditions Period: 2021 Amount of Financing: 15 million rupiah Personnel: Rachma Wikandari	
Industry collaborations over the last 5 years	No	Industry	Year
	1	PT. Lautan Natural Krimerindo (Production and Commercialization of Glucomannan-based Fiber Drink Ingredients as Functional Beverage)	2022
Patents and proprietary rights	No	Title	Year
	1	High Fiber Drink Formula Contains Prebiotic Glucomannan and Its Manufacturing Method	2022
	2	Process of Making a Mixture of Mold and Yeast Starter to Produce Tempeh with High Folate Content and the Products It Produces	2020
	3	Electron Transport: The Process of Making Energy in the Body	2019
	4	Biogas Raw Material Composition from A Mixture of Orange Fruit Waste and Other Organic Waste	2018



Important publications over the last 5 years	Selected recent publications			
	1	Septiyani, R., Wikandari, R. , Santoso, U., Raharjo, S. (2024). Brazilin content, color stability, and antioxidant activity of Sappan wood (<i>Caesalpinia sappan</i> L.) traditional drink by different blanching and drying methods. Trends in Sciences, 21(12): 8535. http://doi.org/10.48048/tis.2024.8535 .		
	2	Marwati, T., Djaafar, T. F., Hatmi, R. U., Kobarsih, M., Indrasari, S. D., Wikandari, R. (2024). Alternative fermentation method of cocoa beans: The use of <i>Lactiplantibacillus plantarum</i> subsp. <i>plantarum</i> HL-15 as starter culture and valorization of cocoa pulp by-product. Journal of Agriculture and Food Research, 18. http://doi.org/10.1016/j.jafr.2024.101398 .		
	3	Ningsih, D. R., Habibie, A., Haryadi, W., Wikandari, R. , Raharjo, T. J. (2024). Antibacterial peptides derived from capra hircus goat milk casein. ChemistrySelect, 9(7): 04191. http://doi.org/10.1002/slct.202304191		
	4	Millati, R., Wikandari, R. , Ariyanto, T., Hasniah, N., Taherzadeh, M. (2023) Anaerobic digestion biorefinery for circular bioeconomy development. Bioresource Technology Reports, 21. http://doi.org/10.1016/j.biteb.2022.101315 .		
	5	Muhammad, D. R. A., Wikandari, R. (2023). Extraction and stability assessment of the bioactive compounds from berries. Berry Bioactive Compound By-Products, 1-44. http://doi.org/10.1016/B978-0-323-95600-0.00007-9 .		
	6	Tologana, R. D., Wikandari, R. , Rahayu, E. T., Suroto, D. A., Utami, T. (2023). Correlation between the chemical, microbiological and sensory characteristics of cream cheese using a mixed and single probiotic culture. Journal of Food Science and Technology, 60(1): 181-189. http://doi.org/10.1007/s13197-022-05603-0 .		
	7	Samodra, E. M. A., Suroto, D. A., Utami, T., Wikandari, R. , Rahayu, E. S. (2023). Cold Stress Response Genes of <i>Lantiplantibacillus plantarum</i> subsp. <i>plantarum</i> Mut-3 and <i>Lantiplantibacillus plantarum</i> subsp. <i>plantarum</i> Mut-7 Support the Ability to Survive in Low-Temperature Conditions. HAYATI Journal of Biosciences, 30(1): 65-70. http://doi.org/10.4308/hjb.30.1.65-70 .		
	8	Ningsih, D.R., Raharjo, T.J., Haryadi, W., & Wikandari, R. (2023). Antifungal activity and identification of bioactive peptide from Etawa crossbreed goat (<i>Capra hircus</i>) milk protein hydrolyzed using trypsin enzyme. Arabian Journal of Chemistry, 16(11): 105249. http://doi.org/10.1016/j.arabjc.2023.105249 .		
	9	Wattimury, A., Suroto, D.A., Utami, T., Wikandari, R. , & Rahayu, E.S. (2023). In silico analysis of antibiotic resistance genes in <i>Lactiplantibacillus plantarum</i> subsp. <i>plantarum</i> Kita-3. Indonesian Journal of Biotechnology, 28 (2): 102-111. https://doi.org/10.22146/ijbiotech.72550 .		
	10	Wikandari, R. , Tanugraha, D. R., Yastanto, A.J., Manikharda, Gmoser, R., & Teixeira, J. A. (2023). Development of Meat Substitutes from Filamentous Fungi Cultivated on Residual Water of Tempeh Factories. Molecules, 28(3) :997. https://doi.org/10.3390/molecules28030997 .		
Activities in	No	Organization	Role	Period



specialist bodies over the last 5 years	1	agriTECH	Editor in Chief	2022-2023
	2	Indonesian Association of Food Technologists Yogyakarta	Treasurer I	2019-2023
	3	Indonesian Association of Food Technologists	Head of Publication Division	2022-2026
	4	Delegate from Republic of Indonesia at The 46th session of the Codex Committee on Food Labelling (CCFL46)	Delegate	2021
	5	Perhimpunan Penggiat Pangan Fungsional dan Nutrasetikal Indonesia (P3FNI)	Member	2023
	6	International Forum on Industrial Bioprocesses (IBA-IFIBiop)	Member	2023