



DEPARTMENT OF FOOD & AGRICULTURAL PRODUCT TECHNOLOGY

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STAFF HANDBOOK

Name	Dr. Fiametta Ayu Purwandari, S.T.P., M.Sc.		
Post	Food Design and Quality		
Academic career	Doctoral Degree	Wageningen University, Netherlands	2024
	Master Degree (Food Science and Technology)	Universitas Gadjah Mada, Indonesia	2011-2014
	Undergraduate Degree (Food and Agricultural Product Technology)	Universitas Gadjah Mada, Indonesia	2006-2010
Employment	Lecturer	Universitas Gadjah Mada	2016-present
Research and development projects over the last 5 years	No	Title of Research and Development Projects	
	1	Combination of Freezing and Heating as an Alternative Method to Overcome Hard-To-Cook in Sword Bean (<i>Canavalia ensiformis</i> , L. (DC)) Period: 2024 Amount of Financing: 15 million rupiah Personnel: Fiametta Ayu Purwandari , Cahyanto MN	
	2	Improvement of Water-Efficient Tempeh Processing Through Acid Fermentation Without Soaking: Utilization of Washing and Soaking Water to Accelerate the Process Period: 2024 Amount of Financing: 15 million rupiah Personnel: Cahyanto MN, Fiametta Ayu Purwandari	
	3	Characterization of a Natural Deep Eutectic Solvent and Its Application in the Extraction of Functional Compounds from Microalgae Using Microwave and Ultrasonic Waves Period: 2024 Amount of Financing: 60 million rupiah Personnel: Devi Yuni Susanti, Widiastuti Setyaningsih, Muhammad Prasetya Kurniawan, Fiametta Ayu Purwandari	
	4	Structurization of Red Palm Oil through the Formation of Colloidal Gels (Emulsion Gel and Biphasic Gel): Physicochemical Properties and Application in Low-Fat Products	



		Period: 2024 Amount of Financing: 50 million rupiah Personnel: Arima Diah Setiowati, Chusnul Hidayat, Fiametta Ayu Purwandari	
	5	Sourdough from Fermentation of Indonesian Local Legumes and Its Effect on the Characteristics of the Resulting Bread. Period: 2024 Amount of Financing: 60 million rupiah Personnel: Rini Yanti, Tyas Utami, Fiametta Ayu Purwandari	
	6	Anti-inflammatory Effects and Gut Barrier Stabilization by a Colon-targeted Phytonutrient Based on Temulawak (<i>Curcuma xanthorrhiza</i>) Period: 2024 Amount of Financing: 60 million rupiah Personnel: Yunika Mayangsari, Tyas Utami, Fiametta Ayu Purwandari	
Industry collaborations over the last 5 years	No	Industry	Year
Patents and proprietary rights	No	Title	Year
Important publications over the last 5 years	Selected recent publications from a total of approx: 10		
	1	Purwandari, F. A. , Fogliano, V. & Capuano, E. (2024). Tempeh fermentation improves the nutritional and functional characteristics of Jack beans (<i>Canavalia ensiformis</i> (L.) DC). Food and Function, 15, 3680-3691. https://doi.org/10.1039/D3FO05379B .	
	2	Purwandari, F. A. , Gahari, R. S., Fogliano, V. & Capuano, E. (2024). Freeze-thaw procedure as an alternative method to reduce the cooking time of Jack bean (<i>Canavalia ensiformis</i> (L.) DC) while retaining its nutritional quality. LWT. 201. 116227. https://doi.org/10.1016/j.lwt.2024.116227 .	
	3	Purwandari, F.A. , Fogliano, V., de Ruijter, N.C., & Capuano, E. (2023). Chemical and microstructural characterization of easy-and hard-to-cook Jack bean (<i>Canavalia ensiformis</i> (L.) DC.) collections. LWT, 189. 115451. https://doi.org/10.1016/j.lwt.2023.115451 .	
	4	Purwandari, F. A. , Westerbos, C., Lee, K., Fogliano, V., & Capuano, E. (2023). Proximate composition, microstructure, and protein and starch digestibility of seven collections of Jack bean (<i>Canavalia ensiformis</i>) with different optimal cooking times. Food research international (Ottawa, Ont.), 170, 112956. https://doi.org/10.1016/j.foodres.2023.112956 .	
	5	Purwandari, F. A. , Annisa, E. D., Rachmawati, A., Puspitasari, D. R., Wikandari, R., Setyaningsih, W., Ningrum, A., & Sardjono (2021). Effect of different cooking methods on chemical composition, nutritional values, and sensory properties of Jack bean (<i>Canavalia ensiformis</i>) tempe. Food Research, 5(3): 327-333. https://doi.org/10.26656/fr.2017.5%283%29.530 .	



	6	Kemhay, N., Yanti, R., Suroto, D. A., & Purwandari, F. A. (2024). The Impact of <i>Flacourtia inermis</i> Roxb (Tomi-Tomi) sourdough prepared using different drying techniques on the physicochemical attributes and characteristics of sourdough bread. <i>Trends in Sciences</i> , 22(3), 8745. https://doi.org/10.48048/tis.2025.8745		
	7	Susanti, D. Y., Kalyani, N. F., Astuti, F. P., Purwandari, F. A. , Kurniawan, M. P., Kistanti, A., Pamungkas, K. D., & Setyaningsih, W. (2025). <i>Characterization and performance evaluation of NADES-CAF in ultrasound and microwave extraction of phycocyanin from Arthrospira platensis</i> . <i>International Journal of Design & Nature and Ecodynamics</i> , 20(1), 21-30. https://doi.org/10.18280/ijdne.200103		
	8	Yanti, R., Utami, T., Purwandari, F. A. , Laili, D. A. N., & Kemhay, N. (2025). <i>Influence of wet and dry sourdough from pigeon pea (Cajanus cajan L. Huth) on the characteristics of wheat bread</i> . <i>Trends in Sciences</i> , 22(9), 10468. https://doi.org/10.48048/tis.2025.10468		
	9	Wikandari, R., Putro, A. W., Suroto, D. A., Purwandari, F. A. , & Setyaningsih, W. (2021). <i>Combining a flipped learning approach and an animated video to improve first-year undergraduate students' understanding of electron transport chains in a biochemistry course</i> . <i>Journal of Chemical Education</i> , 98(7), 2236-2242. https://doi.org/10.1021/acs.jchemed.0c01477		
	10	Wikandari, R., Mayningsih, I. C., Sari, M. D. P., Purwandari, F. A. , Setyaningsih, W., Rahayu, E. S., & Taherzadeh, M. J. (2020). <i>Assessment of microbiological quality and mycotoxin in dried chili by morphological identification, molecular detection, and chromatography analysis</i> . <i>International Journal of Environmental Research and Public Health</i> , 17(6), 1847. https://doi.org/10.3390/ijerph17061847		
Activities in specialist bodies over the last 5 years	No	Organization	Role	Period