



DEPARTMENT OF FOOD & AGRICULTURAL PRODUCT TECHNOLOGY

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STAFF HANDBOOK

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| Name | Prof. Dr. Ir. Yudi Pranoto, S.T.P., M.P. | | |
| Post | Food Biophysics | | |
| Academic career | Post Doctoral (Biopolymer Technology) | Korean University, Republic of Korea | 2005-2006 |
| | Doctoral Degree (Food Bioprocess Technology) | Asian Institute of Technology, Thailand | 2001-2004 |
| | Master Degree (Plantation Technology) | Universitas Gadjah Mada, Indonesia | 1998-2000 |
| | Undergraduate Degree (Food and Agricultural Product Technology) | Universitas Gadjah Mada, Indonesia | 1992-1997 |
| Employment | Lecturer | Universitas Gadjah Mada | 1999-present |
| | Deputy Dean for Academic and Student Affairs | Faculty of Agricultural Technology, Universitas Gadjah Mada | 2021-2026 |
| Research and development projects over the last 5 years | No. | Title of Research and Development Projects | |
| | 1 | Modification of Jackfruit Seed Starch (<i>Artocarpus heterophyllus</i>) into Porous Starch as an Encapsulant Applied in Milk Fermentation Period: 2024 Amount of Financing: 55.83 million rupiah Personils: Yudi Pranoto | |
| | 2 | Physical-Chemical Properties and In Vitro Digestibility of Lipid Amylose Complexes in Buras with Different Ratios of Rice and Coconut Milk and Repeated Cooling-Heating Cycles Period: 2024 Amount of Financing: 50 million rupiah Personils: Yudi Pranoto | |
| | 3 | Nanocalcium from Fish Industry Waste Bone with High Calcium Bioavailability to Increase Bone Mass Density in Rats as a Model Period: 2022 Amount of Financing: 50 million rupiah Personils: Yudi Pranoto , Priyanto T | |



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| | 4 | Production of Porous Starch from Garut (<i>Maranta arundinacea</i>) with Thermostable α -Amylase and Glucoamylase Enzymes for Natural Adsorbent Application Period: 2022 Amount of Financing: 55 million rupiah Personils: Yudi Pranoto | |
| | 5 | The Role of Nanoprecipitation in the Formation of Breadfruit Starch Nanoparticles as Emulsifiers in Pickering Emulsions Carrying Cinnamon Essential Oil (<i>Cinnamomum burmanii</i>) Period: 2021 Amount of Financing: 62 million rupiah Personils: Yudi Pranoto | |
| | 6 | Extraction of Rice Bran Oil Using the Microemulsion Method for the Production of Nano-size Lipid Carriers (NLC) as Carriers of Bioactive Food Components Period: 2021 Amount of Financing: 34.33 million rupiah Personils: Sri Raharjo, Andriati N, Yudi Pranoto , Yunca MH | |
| | 7 | Modification of Cassava Starch (<i>Xanthosoma sagittifolium</i>) from Maluku and Its Potential as a Hypoglycemic Food Period: 2021 Amount of Financing: 31.18 million rupiah Personils: Cynthia GCL, Yudi Pranoto , Yunca MH | |
| | 8 | Isolation and Identification of Volatile Compounds, Precursor Compounds, and the Formation Mechanism of Volatile Compounds that Determine the Aroma of Bay Leaves (<i>Syzygium polyanthum Wight.</i>) Period: 2020 Amount of Financing: 48 million rupiah Personils: Yudi Pranoto , Bima Putra P, Supriyadi | |
| | 9 | Production of Starch Nanoparticles Based on Breadfruit Commodities and Their Application as Emulsifiers in Food Emulsions Period: 2020 Amount of Financing: 45.8 million rupiah Personils: Yudi Pranoto , Bovi Wira H, Supriyanto | |
| | 10 | Production of Water-Soluble Nanoencapsulation Based on Chitosan Using the Innovative Steam Explosion Process and Its Application for Nanoencapsulation of Natural Liquid Smoke Preservatives Period: 2020 Amount of Financing: 168.75 million rupiah Personils: Sri Anggrahini, Yudi Pranoto , Umar S | |
| Industry collaborations over the last 5 years | No | Industry | Year |
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| Patents and proprietary rights | No | Patents and proprietary rights | Year |
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| | 1 | Starch Modification Technology | 2023 |
| Important publications over the last 5 years | Selected recent publications | | |
| | 1 | Kusumawati, P., Pranoto, Y. , Triwitono, P., & Latief, F. D. (2024). The Effect of Grouper Bone Nano-Calcium (GBN) and Medium-Chain Triglyceride (MCT) Supplementation on the Ovariectomized Rats. <i>Journal of Nutrition and Metabolism</i> , 2024(1). https://doi.org/10.1155/jnme/4832594 . | |
| | 2 | Witasari, L. D., Nisrina, S., Yani, A. I., Heryadi, A. A., & Pranoto, Y. (2024). Characterization of porous starch produced from arrowroot (<i>Maranta arundinacea L.</i>) by enzymatic hydrolysis with α -amylase and glucoamylase. <i>Carbohydrate Polymer Technologies and Applications</i> , Vol 7. https://doi.org/10.1016/j.carpta.2024.100445 . | |
| | 3 | Purwitasari, L., Wulanjati, M. P., Pranoto, Y. , & Witasari, L. D. (2023). Characterization of porous starch from edible canna (<i>Canna edulis Kerr.</i>) produced by enzymatic hydrolysis using thermostable α -amylase. <i>Food Chemistry Advances</i> , 2. https://doi.org/10.1016/j.focha.2022.100152 . | |
| | 4 | Rumiyati, Nugroho, A. E., Sani, P. N., Cahyani, S. K., Purwestri, Y. A., Pranoto, Y. , Saloko, S., & Widyastuti, S. (2023). Antihypertensive effect of functional rice analogue containing corn, mocaf, pigeon pea and seaweed on rats. <i>Food Research</i> , 7(4): 36-44. https://doi.org/10.26656/fr.2017.7(4).067 . | |
| | 5 | Hasanah, Y. M., Raharjo, S., Pranoto, Y. , & Ningrum, A. (2023). The optimization of oil extraction by surfactant-assisted aqueous extraction process of rice bran (<i>Oryza sativa L.</i>) using Box-Behnken design. <i>Food Research</i> , 7(5): 219-225. https://doi.org/10.26656/fr.2017.7(5).968 . | |
| | 6 | Yonata, D., Triwitono, P., Lestari, L. A., & Pranoto, Y. (2023). Physicochemical, structure and functional characteristics of <i>Tacca leontopetaloides</i> starches grown in Indonesia. <i>Biodiversitas</i> , 24(11): 6396-6406. https://doi.org/10.13057/biodiv/d241165 . | |
| | 7 | Dewi, A. M., Santoso, U., Pranoto, Y. , & Marseno, D. W. (2022). Dual Modification of Sago Starch via Heat Moisture Treatment and Octenyl Succinylation to Improve Starch Hydrophobicity. <i>Polymers</i> , 14, 1086. https://doi.org/10.3390/polym14061086 . | |
| | 8 | Harsanto, B. W., Pranoto, Y. , Supriyanto, & Kartini, I. (2022). Breadfruit (<i>Artocarpus altilis</i>) starch-based nanoparticle formation through dropwise mixing nanoprecipitation. <i>Food Research</i> , 6(3): 34-41. https://doi.org/10.26656/fr.2017.6(3).30 . | |
| | 9 | Marzuki, S. U., Pranoto, Y. , Khumsap, T., & Nguyen, L. T. (2021). Effect of blanching pretreatment and microwave-vacuum drying on drying kinetics and physicochemical properties of purple-fleshed sweet | |



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| | | potato. <i>Journal of Food Science and Technology</i> , 58(8): 2884-2895. https://doi.org/10.1007/s13197-020-04789-5 . | | |
| | 10 | Yuliatmoko, W., Murdiati, A., Pranoto, Y. , & Marsono, Y. The effect of mixture of banana pseudostem flour proportion on organoleptic properties, dietary fiber content, resistant starch, and antioxidants of canna starch-based food bar. <i>Food Research</i> , 4(3): 906-916. https://doi.org/10.26656/fr.2017.4(3).382 . | | |
| Activities in specialist bodies over the last 5 years | No | Organisation | Role | Period |
| | 1 | Indonesian Association of Food Technologists (PATPI) | Head of National, International, and Industry Collaboration Division of PATPI Central Board | 2022-2026 |
| | | | Advisor of PATPI Yogyakarta Branch | 2024-2027 |