

DAFTAR PUSTAKA

- Abd Razak, D. L., Jamaluddin, A., Abd Rashid, N. Y., Abd Ghani, A., & Abdul Manan, M. (2019). Assessment of fermented broken rice extracts for their potential as functional ingredients in cosmeceutical products. *Annals of Agricultural Sciences*, 64(2), 176–182. <https://doi.org/10.1016/j.aos.2019.11.003>
- Adebo, O. A., Kayitesi, E., Tugizimana, F., & Njobeh, P. B. (2019). Differential metabolic signatures in naturally and lactic acid bacteria (LAB) fermented ting (a Southern African food) with different tannin content, as revealed by gas chromatography mass spectrometry (GC–MS)-based metabolomics. *Food Research International*, 121, 326–335. <https://doi.org/10.1016/j.foodres.2019.03.050>
- Adl, S. M., Bass, D., Lane, C. E., Lukeš, J., Schoch, C. L., Smirnov, A., Agatha, S., Berney, C., Brown, M. W., Burki, F., Cárdenas, P., Čepička, I., Chistyakova, L., del Campo, J., Dunthorn, M., Edvardsen, B., Eglit, Y., Guillou, L., Hampl, V., ... Zhang, Q. (2019). Revisions to the Classification, Nomenclature, and Diversity of Eukaryotes. *Journal of Eukaryotic Microbiology*, 66(1), 4–119. <https://doi.org/10.1111/jeu.12691>
- Agale, S. V., Gopalakrishnan, S., Ambhure, K. G., Chandravanshi, H., Gupta, R., & Wani, S. P. (2018). Mass Production of Entomopathogenic Fungi (Metarhizium anisopliae) using Different Grains as a Substrate. *International Journal of Current Microbiology and Applied Sciences*, 7(1), 2227–2232. <https://doi.org/10.20546/ijcmas.2018.701.268>
- Agrawal, K., Chaturvedi, V., & Verma, P. (2018). Fungal laccase discovered but yet undiscovered. *Bioresources and Bioprocessing*, 5(1), 4. <https://doi.org/10.1186/s40643-018-0190-z>
- Ali, S., Yousaf, N., Usman, M., Javed, M. A., Nawaz, M., Ali, B., Azam, M., Ercisli, S., Tirasci, S., & Ahmed, A. E. (2024). *Volvariella volvacea* (paddy straw mushroom): A mushroom with exceptional medicinal and nutritional properties. *Heliyon*, 10(21). <https://doi.org/10.1016/j.heliyon.2024.e39747>
- Andriani, A., Agustriana, E., Perwitasari, U., Wahyuwati, F. A., Hastuty, A., Ferdian, P. R., & Trismilah. (2024). High melanin degradation by laccase from a novel isolated white rot fungi *Trametes polyzona* 023 in the presence of phenolic compounds. *Bioresource Technology Reports*, 27. <https://doi.org/10.1016/j.biteb.2024.101923>
- Andriani, A., Sukorini, A., Perwitasari, U., & Yopi. (2019). Enhancement of laccase production in a new isolated *Trametes hirsuta* LBF-AA017 by lignocellulosic materials and its application for removal of chemical dyes. *IOP Conference Series: Earth and Environmental Science*, 308(1), 012015. <https://doi.org/10.1088/1755-1315/308/1/012015>

- Andriani, A., & Yanto, D. H. Y. (2024). Fungal Applications in Skincare Products. In *Biomass-based Cosmetics* (pp. 113–132). Springer Nature Singapore. https://doi.org/10.1007/978-981-97-1908-2_5
- Anthony Mescher. (2010). *Junqueira's Basic Histology: Text and Atlas, 12th Edition* (12th ed.). EGC.
- Asemoloye, M. D., Marchisio, M. A., Gupta, V. K., & Pecoraro, L. (2021). Genome-based engineering of ligninolytic enzymes in fungi. In *Microbial Cell Factories* (Vol. 20, Issue 1). BioMed Central Ltd. <https://doi.org/10.1186/s12934-021-01510-9>
- Baiocco, P., Barreca, A. M., Fabbrini, M., Galli, C., & Gentili, P. (2003). Promoting laccase activity towards non-phenolic substrates: a mechanistic investigation with some laccase–mediator systems. *Org. Biomol. Chem.*, 1(1), 191–197. <https://doi.org/10.1039/B208951C>
- Bao, D., Gong, M., Zheng, H., Chen, M., Zhang, L., Wang, H., Jiang, J., Wu, L., Zhu, Y., Zhu, G., Zhou, Y., Li, C., Wang, S., Zhao, Y., Zhao, G., & Tan, Q. (2013). Sequencing and Comparative Analysis of the Straw Mushroom (*Volvariella volvacea*) Genome. *PLoS ONE*, 8(3). <https://doi.org/10.1371/journal.pone.0058294>
- Bao, D., & Wang, H. (2015). Identification and Application of *Volvariella volvacea* Mating Type Genes to Mushroom Breeding. In *Mushroom Biotechnology: Developments and Applications* (pp. 191–201). Elsevier. <https://doi.org/10.1016/B978-0-12-802794-3.00011-4>
- Bhattacharyya, A., Ahmed, M., Wadhwa, R., Aggarwal, S., Mustafiz, A., & Rajagopalan, G. (2022). High Production of *Trametes cinnabarina* Laccase (lac1) by Suspended and Immobilized Cells of Recombinant *Pichia pastoris* from Crude Glycerol. *Waste and Biomass Valorization*, 13(4), 2149–2168. <https://doi.org/10.1007/s12649-021-01661-1>
- Boonsong, S., Klaypradit, W., & Wilaipun, P. (2016). Antioxidant activities of extracts from five edible mushrooms using different extractants. *Agriculture and Natural Resources*, 50(2), 89–97. <https://doi.org/10.1016/j.anres.2015.07.002>
- BPOM. (2023). *BPOM Temukan Lebih Dari 2 Juta Pieces Produk Mengandung Bahan Dilarang/Berbahaya*. Badan Pengawasan Obat Dan Makanan. <https://www.pom.go.id/berita/bpom-temukan-lebih-dari-2-juta-pieces-produk-mengandung-bahan-dilarang-berbahaya>
- Carmona-Ribeiro, A. M., Prieto, T., & Nantes, I. L. (2015). Nanostructures for peroxidases. *Frontiers in Molecular Biosciences*, 2. <https://doi.org/10.3389/fmolb.2015.00050>
- Chen, J., Chen, T., Qiu, M., Li, L., Zhong, Q., Wei, Q., Deng, Y., Xie, B., Jiang, Y., & Chen, B. (2021). Identification of ACC synthetase genes in *Volvariella*

- volvacea* and analysis of their response to ethephon and 1-methylcyclopropene treatments. *Scientia Horticulturae*, 278. <https://doi.org/10.1016/j.scienta.2020.109848>
- Chen, S. (2003). Induction of laccase activity in the edible straw mushroom, *Volvariella volvacea*. *FEMS Microbiology Letters*, 218(1), 143–148. [https://doi.org/10.1016/S0378-1097\(02\)01131-X](https://doi.org/10.1016/S0378-1097(02)01131-X)
- Cheung, L. M., Cheung, P. C. K., & Ooi, V. E. C. (n.d.). *Antioxidant activity and total phenolics of edible mushroom extracts*. www.elsevier.com/locate/foodchem
- Chien, C. C., Tsai, M. L., Chen, C. C., Chang, S. J., & Tseng, C. H. (2008). Effects on tyrosinase activity by the extracts of *Ganoderma lucidum* and related mushrooms. *Mycopathologia*, 166(2), 117–120. <https://doi.org/10.1007/s11046-008-9128-x>
- Da Luz Calado, M., Silva, J., Alves, C., Susano, P., Santos, D., Alves, J., Martins, A., Gaspar, H., Pedrosa, R., & Campos, M. J. (2021). Marine endophytic fungi associated with *Halopteris scoparia* (Linnaeus) Sauvageau as producers of bioactive secondary metabolites with potential dermocosmetic application. *PLoS ONE*, 16(5 May). <https://doi.org/10.1371/journal.pone.0250954>
- Dadzie, O. E., & Petit, A. (2009). Skin bleaching: Highlighting the misuse of cutaneous depigmenting agents. In *Journal of the European Academy of Dermatology and Venereology* (Vol. 23, Issue 7, pp. 741–750). <https://doi.org/10.1111/j.1468-3083.2009.03150.x>
- Draelos, Z. D. (2019). Cosmeceuticals: What's Real, What's Not. In *Dermatologic Clinics* (Vol. 37, Issue 1, pp. 107–115). W.B. Saunders. <https://doi.org/10.1016/j.det.2018.07.001>
- Dulay, R. M. R., Vicente, J. J. A., Dela Cruz, A. G., Gagarin, J. M., Fernando, W., Kalaw, S. P., & Reyes, R. G. (2016). Antioxidant activity and total phenolic content of *Volvariella volvacea* and *Schizophyllum commune* mycelia cultured in indigenous liquid media. *Mycosphere*, 7(2), 131–138. <https://doi.org/10.5943/mycosphere/7/2/4>
- Dullah, S., Hazarika, D. J., Goswami, G., Borgohain, T., Ghosh, A., Barooah, M., Bhattacharyya, A., & Boro, R. C. (2021). Melanin production and laccase mediated oxidative stress alleviation during fungal-fungal interaction among basidiomycete fungi. *IMA Fungus*, 12(1), 33. <https://doi.org/10.1186/s43008-021-00082-y>
- Emwas, A.-H. M., Al-Talla, Z. A., Yang, Y., & Kharbatia, N. M. (2015). *Gas Chromatography–Mass Spectrometry of Biofluids and Extracts* (pp. 91–112). https://doi.org/10.1007/978-1-4939-2377-9_8
- Ferraroni, M., Myasoedova, N. M., Schmatchenko, V., Leontievsky, A. A., Golovleva, L. A., Scozzafava, A., & Briganti, F. (2007). Crystal structure of a

- blue laccase from *Lentinus tigrinus*: Evidences for intermediates in the molecular oxygen reductive splitting by multicopper oxidases. *BMC Structural Biology*, 7. <https://doi.org/10.1186/1472-6807-7-60>
- Gad, S. C., & Pham, T. (2014). Hydroquinone. In *Encyclopedia of Toxicology* (pp. 979–981). Elsevier. <https://doi.org/10.1016/B978-0-12-386454-3.00855-1>
- Galhaup, C., & Haltrich, D. (2001). Enhanced formation of laccase activity by the white-rot fungus *Trametes pubescens* in the presence of copper. *Applied Microbiology and Biotechnology*, 56(1–2), 225–232. <https://doi.org/10.1007/s002530100636>
- Ghobad-Nejhad, M., Dima, B., Cui, B.-K., & Si, J. (2023). Editorial: Basidiomycete fungi: From biosystematics and biodiversity to biotechnology. *Frontiers in Microbiology*, 14. <https://doi.org/10.3389/fmicb.2023.1128319>
- Goldstein, J. I., Newbury, D. E., Echlin, P., Joy, D. C., Lyman, C. E., Lifshin, E., Sawyer, L., & Michael, J. R. (2003). *Scanning Electron Microscopy and X-ray Microanalysis*. Springer US. <https://doi.org/10.1007/978-1-4615-0215-9>
- He, M. Q., Zhao, R. L., Liu, D. M., Denchev, T. T., Begerow, D., Yurkov, A., Kemler, M., Millanes, A. M., Wedin, M., McTaggart, A. R., Shivas, R. G., Buyck, B., Chen, J., Vizzini, A., Papp, V., Zmitrovich, I. V., Davoodian, N., & Hyde, K. D. (2022). Species diversity of Basidiomycota. In *Fungal Diversity* (Vol. 114, Issue 1, pp. 281–325). Springer Science and Business Media B.V. <https://doi.org/10.1007/s13225-021-00497-3>
- Hofrichter, M. (2002). Review: lignin conversion by manganese peroxidase (MnP). *Enzyme and Microbial Technology*, 30(4), 454–466. [https://doi.org/10.1016/S0141-0229\(01\)00528-2](https://doi.org/10.1016/S0141-0229(01)00528-2)
- Hou, D., Yousaf, L., Xue, Y., Hu, J., Wu, J., Hu, X., Feng, N., & Shen, Q. (2019). Mung bean (*Vigna radiata* L.): Bioactive polyphenols, polysaccharides, peptides, and health benefits. In *Nutrients* (Vol. 11, Issue 6). MDPI AG. <https://doi.org/10.3390/nu11061238>
- Ire, F., & Ahuekwe, E. (2016). Production of Fungal Laccase Using Orange Peelings as Substrate by Submerged Static Fermentation. *British Microbiology Research Journal*, 15(5), 1–19. <https://doi.org/10.9734/BMRJ/2016/27257>
- Janusz, G., Pawlik, A., Sulej, J., Świdarska-Burek, U., Jarosz-Wilkolazka, A., & Paszczyński, A. (2017). Lignin degradation: microorganisms, enzymes involved, genomes analysis and evolution. *FEMS Microbiology Reviews*, 41(6), 941–962. <https://doi.org/10.1093/femsre/fux049>
- Kalangi, S. J. R. (2014). HISTOFISIOLOGI KULIT. *JURNAL BIOMEDIK (JBM)*, 5(3). <https://doi.org/10.35790/jbm.5.3.2013.4344>
- Karolina, R. (n.d.). *SCANNING ELECTRON MICROSCOPE (SEM) TM 3000: TEORI DAN APLIKASINYA*. <https://www.researchgate.net/publication/370953162>

- Khan, B. A., Mahmood, T., Mena, F., Shahzad, Y., Yousaf, A. M., Hussain, T., & Ray, S. D. (2019). New Perspectives on the Efficacy of Gallic Acid in Cosmetics & Nanocosmeceuticals. *Current Pharmaceutical Design*, 24(43), 5181–5187. <https://doi.org/10.2174/1381612825666190118150614>
- Kumar, A., & Chandra, R. (2020). Ligninolytic enzymes and its mechanisms for degradation of lignocellulosic waste in environment. In *Heliyon* (Vol. 6, Issue 2). Elsevier Ltd. <https://doi.org/10.1016/j.heliyon.2020.e03170>
- Langfelder, K., Streibel, M., Jahn, B., Haase, G., & Brakhage, A. A. (2003). Biosynthesis of fungal melanins and their importance for human pathogenic fungi. *Fungal Genetics and Biology*, 38(2), 143–158. [https://doi.org/10.1016/S1087-1845\(02\)00526-1](https://doi.org/10.1016/S1087-1845(02)00526-1)
- Levin, L., Forchiassin, F., & Ramos, A. M. (2002). Copper induction of lignin-modifying enzymes in the white-rot fungus *Trametes trogii*. *Mycologia*, 94(3), 377–383. <https://doi.org/10.1080/15572536.2003.11833202>
- Liu, Z., Zhang, K., Lin, J. F., & Guo, L. Q. (2011). Breeding cold tolerance strain by chemical mutagenesis in *Volvariella volvacea*. *Scientia Horticulturae*, 130(1), 18–24. <https://doi.org/10.1016/j.scienta.2011.06.020>
- Matera, I., Gullotto, A., Tilli, S., Ferraroni, M., Scozzafava, A., & Briganti, F. (2008). Crystal structure of the blue multicopper oxidase from the white-rot fungus *Trametes trogii* complexed with p-toluate. *Inorganica Chimica Acta*, 361(14–15), 4129–4137. <https://doi.org/10.1016/j.ica.2008.03.091>
- Meletiadiis, J., Meis, J. F. G. M., Mouton, J. W., & Verweij, P. E. (2001). Analysis of Growth Characteristics of Filamentous Fungi in Different Nutrient Media. *Journal of Clinical Microbiology*, 39(2), 478–484. <https://doi.org/10.1128/JCM.39.2.478-484.2001>
- Mikiashvili, N., Wasser, S. P., Nevo, E., & Elisashvili, V. (2006). Effects of carbon and nitrogen sources on *Pleurotus ostreatus* ligninolytic enzyme activity. *World Journal of Microbiology and Biotechnology*, 22(9), 999–1002. <https://doi.org/10.1007/s11274-006-9132-6>
- Minussi, R. C., Miranda, M. A., Silva, J. A., Ferreira, C. V., Aoyama, H., Marangoni, S., Rotilio, D., Pastore, G. M., & Durán, N. (2007). Purification, characterization and application of laccase from *Trametes versicolor* for colour and phenolic removal of olive mill wastewater in the presence of 1-hydroxybenzotriazole. *African Journal of Biotechnology*, 6(10), 1248–1254. <http://www.academicjournals.org/AJB>
- Nadhilah, D., Andriani, A., Agustriana, E., Nuryana, I., Mubarik, N. R., Dewi, K. S., Rahmani, N., Yanto, D. H. Y., Ismayati, M., Perwitasari, U., Laksmi, F. A., & Wijaya, H. (2024). Co-catalysis of melanin degradation by laccase-manganese peroxidase complex from *Trametes hirsuta* OK271075 for application in whitening cosmetics. *Biocatalysis and Biotransformation*, 42(2), 273–285. <https://doi.org/10.1080/10242422.2023.2188995>

- Nakagawa, M., Kawai, K., & Kawai, K. (1995). Contact allergy to kojic acid in skin care products. *Contact Dermatitis*, 32(1), 9–13. <https://doi.org/10.1111/j.1600-0536.1995.tb00832.x>
- Noor, M., Malahayati, S., & Nastiti, K. (2023). *FORMULASI DAN UJI STABILITAS SEDIAAN TONER WAJAH EKSTRAK BUAH PARE (Momordica charantia L) SEBAGAI ANTI JERAWAT DENGAN VARIASI SURFAKTAN* (Vol. 5, Issue 1).
- Nor Azmah, U., Makeri, M. U., Bagirei, S. Y., & Shehu, A. B. (2023). Compositional characterization of starch, proteins and lipids of long bean, dwarf long bean, mung bean and French bean seed flours. *Measurement: Food*, 12. <https://doi.org/10.1016/j.meafoo.2023.100111>
- Pandey, A. T., Pandey, I., Hachenberger, Y., Krause, B. C., Haidar, R., Laux, P., Luch, A., Singh, M. P., & Singh, A. V. (2020). Emerging paradigm against global antimicrobial resistance via bioprospecting of mushroom into novel nanotherapeutics development. In *Trends in Food Science and Technology* (Vol. 106, pp. 333–344). Elsevier Ltd. <https://doi.org/10.1016/j.tifs.2020.10.025>
- Park, S., Jung, D., Do, H., Yun, J., Lee, D., Hwang, S., & Lee, S. H. (2021). Laccase-mediator system using a natural mediator as a whitening agent for the decolorization of melanin. *Polymers*, 13(21). <https://doi.org/10.3390/polym13213671>
- Perdani, M. S., Margaretha, G., Sahlan, M., & Hermansyah, H. (2020). Solid state fermentation method for production of laccase enzyme with bagasse, cornstalk and rice husk as substrates for adrenaline biosensor. *Energy Reports*, 6, 336–340. <https://doi.org/10.1016/j.egyr.2019.08.065>
- Pérez-Rivero, C., & López-Gómez, J. P. (2023). Unlocking the Potential of Fermentation in Cosmetics: A Review. In *Fermentation* (Vol. 9, Issue 5). MDPI. <https://doi.org/10.3390/fermentation9050463>
- Pimentel, F. B., Alves, R. C., Rodrigues, F., & Oliveira, M. B. P. P. (2018). Macroalgae-derived ingredients for cosmetic industry-an update. In *Cosmetics* (Vol. 5, Issue 1). MDPI AG. <https://doi.org/10.3390/cosmetics5010002>
- Pollock, S., Taylor, S., Oyerinde, O., Nurmohamed, S., Dlova, N., Sarkar, R., Galadari, H., Manela-Azulay, M., Chung, H. S., Handog, E., & Kourosh, A. S. (2021). The dark side of skin lightening: An international collaboration and review of a public health issue affecting dermatology. In *International Journal of Women's Dermatology* (Vol. 7, Issue 2, pp. 158–164). Elsevier Inc. <https://doi.org/10.1016/j.ijwd.2020.09.006>
- Qin, X., Zhang, J., Zhang, X., & Yang, Y. (2014). Induction, purification and characterization of a novel manganese peroxidase from *irpex lacteus* CD2 and its application in the decolorization of different types of dye. *PLoS ONE*, 9(11). <https://doi.org/10.1371/journal.pone.0113282>

- Renato, J., Cavallazzi, P., Kasuya, C. M., & Soares, M. A. (2005). SCREENING OF INDUCERS FOR LACCASE PRODUCTION BY LENTINULA EDODES IN LIQUID MEDIUM. *Brazilian Journal of Microbiology*, 36, 383–387.
- Reyes, C., Poulin, A., Nyström, G., Schwarze, F. W. M. R., & Ribera, J. (2021). Enzyme activities of five white-rot fungi in the presence of nanocellulose. *Journal of Fungi*, 7(3). <https://doi.org/10.3390/jof7030222>
- Rompothi, O., Pradipasena, P., Tananuwong, K., Somwangthanaroj, A., & Janjarasskul, T. (2017). Development of non-water soluble, ductile mung bean starch based edible film with oxygen barrier and heat sealability. *Carbohydrate Polymers*, 157, 748–756. <https://doi.org/10.1016/j.carbpol.2016.09.007>
- S, V., S, R., & M, M. J. (2024). Molecular phylogeny of fungi: an overview about the concepts, types and flowcharts of the fungal classification. In *Archives of Phytopathology and Plant Protection* (Vol. 57, Issue 5, pp. 339–370). Taylor and Francis Ltd. <https://doi.org/10.1080/03235408.2024.2365626>
- Sangthong, S., Pintathong, P., Pongsua, P., Jirarat, A., & Chaiwut, P. (2022). Polysaccharides from *Volvariella volvacea* Mushroom: Extraction, Biological Activities and Cosmetic Efficacy. *Journal of Fungi*, 8(6). <https://doi.org/10.3390/jof8060572>
- Santoso Reksohadiwinoto, B., Rosmalawati, S., Tri Cahyana, P., Bambang Hariyanto, D., Teknologi Agroindustri, P., Pengkajian dan Penerapan Teknologi, B., Bioteknologi, B., Pengkajian dan Penerapan Teknologi Gedung, B., & Serpong Tangerang Selatan, P. (2017). *Enzim Laccase dari Edible Mushroom untuk Pemutihan Pati Sagu Ramah Lingkungan Laccase Enzyme from Edible Mushroom for Bioleaching Sago Starch with Environmental Friendly*.
- Schneider, W. D. H., Fontana, R. C., Mendonça, S., de Siqueira, F. G., Dillon, A. J. P., & Camassola, M. (2018). High level production of laccases and peroxidases from the newly isolated white-rot basidiomycete *Marasmiellus palmivorus* VE111 in a stirred-tank bioreactor in response to different carbon and nitrogen sources. *Process Biochemistry*, 69, 1–11. <https://doi.org/10.1016/j.procbio.2018.03.005>
- Shi, Y., Chai, L., Tang, C., Yang, Z., Zhang, H., Chen, R., Chen, Y., & Zheng, Y. (2013). Characterization and genomic analysis of kraft lignin biodegradation by the beta-proteobacterium *Cupriavidus basilensis* B-8. *Biotechnology for Biofuels*, 6(1). <https://doi.org/10.1186/1754-6834-6-1>
- Shin, S. K., Hyeon, J. E., Joo, Y. C., Jeong, D. W., You, S. K., & Han, S. O. (2019). Effective melanin degradation by a synergistic laccase-peroxidase enzyme complex for skin whitening and other practical applications. *International Journal of Biological Macromolecules*, 129, 181–186. <https://doi.org/10.1016/j.ijbiomac.2019.02.027>

- Shraddha, Shekher, R., Sehgal, S., Kamthania, M., & Kumar, A. (2011). Laccase: Microbial sources, production, purification, and potential biotechnological applications. In *Enzyme Research* (Vol. 2011, Issue 1). <https://doi.org/10.4061/2011/217861>
- Soden, D. M., & Dobson, A. D. W. (2001). Differential regulation of laccase gene expression in *Pleurotus sajor-caju* The GenBank accession numbers for the sequences determined in this work are AF297525–AF297528. *Microbiology*, 147(7), 1755–1763. <https://doi.org/10.1099/00221287-147-7-1755>
- Sommerlad, M. (2022). Skin lightening: causes and complications. *Clinical and Experimental Dermatology*, 47(2), 264–270. <https://doi.org/10.1111/ced.14972>
- Stępień, K., Dzierżęga-Lęcznar, A., Kurkiewicz, S., & Tam, I. (2009). Melanin from epidermal human melanocytes: Study by pyrolytic GC/MS. *Journal of the American Society for Mass Spectrometry*, 20(3), 464–468. <https://doi.org/10.1016/j.jasms.2008.11.003>
- Sturm, R. A., Teasdale, R. D., & Box, N. F. (2001). Human pigmentation genes: identification, structure and consequences of polymorphic variation. *Gene*, 277(1–2), 49–62. [https://doi.org/10.1016/S0378-1119\(01\)00694-1](https://doi.org/10.1016/S0378-1119(01)00694-1)
- Sujarit, K., Suwannarach, N., Kumla, J., & Lomthong, T. (2021). Mushrooms: Splendid Gifts for the Cosmetic Industry. In *Chiang Mai J. Sci* (Vol. 48, Issue 3). <http://epg.science.cmu.ac.th/ejournal/>
- Sung, H. J., Khan, M. F., & Kim, Y. H. (2019). Recombinant lignin peroxidase-catalyzed decolorization of melanin using in-situ generated H₂O₂ for application in whitening cosmetics. *International Journal of Biological Macromolecules*, 136, 20–26. <https://doi.org/10.1016/j.ijbiomac.2019.06.026>
- Suzuki-Iwashima, A., Matsuura, H., Iwasawa, A., & Shiota, M. (2020). Metabolomics analyses of the combined effects of lactic acid bacteria and *Penicillium camemberti* on the generation of volatile compounds in model mold-surface-ripened cheeses. *Journal of Bioscience and Bioengineering*, 129(3), 333–347. <https://doi.org/10.1016/j.jbiosc.2019.09.005>
- Thuc, L. V., Corales, R. G., Sajor, J. T., Truc, N. T. T., Hien, P. H., Ramos, R. E., Bautista, E., Tado, C. J. M., Ompad, V., Son, D. T., & Van Hung, N. (2019). Rice-Straw Mushroom Production. In *Sustainable Rice Straw Management* (pp. 93–109). Springer International Publishing. https://doi.org/10.1007/978-3-030-32373-8_6
- Videira, I. F. dos S., Lima Moura, D. F., & Vasconcelos Magina, S. B. L. M. (2013). Mecanismos reguladores da melanogênese. In *Anais Brasileiros de Dermatologia* (Vol. 88, Issue 1, pp. 76–83). <https://doi.org/10.1590/S0365-05962013000100009>

- Vrsanska, M., Voberkova, S., Langer, V., Palovcikova, D., Moulick, A., Adam, V., & Kopel, P. (2016). Induction of laccase, lignin peroxidase and manganese peroxidase activities in white-rot fungi using copper complexes. *Molecules*, 21(11). <https://doi.org/10.3390/molecules21111553>
- WHO. (2019). *Mercury in skin lightening products*. World Health Organization. <https://www.who.int/publications/i/item/WHO-CED-PHE-EPE-19.13>
- Wu, Y., Choi, M.-H., Li, J., Yang, H., & Shin, H.-J. (2016). Mushroom Cosmetics: The Present and Future. *Cosmetics*, 3(3), 22. <https://doi.org/10.3390/cosmetics3030022>
- Xing, Z. T., Cheng, J. H., Tan, Q., & Pan, Y. J. (2006). Effect of nutritional parameters on laccase production by the culinary and medicinal mushroom, *Grifola frondosa*. *World Journal of Microbiology and Biotechnology*, 22(8), 799–806. <https://doi.org/10.1007/s11274-005-9106-0>
- Xu, H., Guo, M.-Y., Gao, Y.-H., Bai, X.-H., & Zhou, X.-W. (2017). Expression and characteristics of manganese peroxidase from *Ganoderma lucidum* in *Pichia pastoris* and its application in the degradation of four dyes and phenol. *BMC Biotechnology*, 17(1), 19. <https://doi.org/10.1186/s12896-017-0338-5>
- Xu, M., Zhu, S., Li, Y., Xu, S., Shi, G., & Ding, Z. (2021). Effect of selenium on mushroom growth and metabolism: A review. *Trends in Food Science & Technology*, 118, 328–340. <https://doi.org/10.1016/j.tifs.2021.10.018>
- Yang, W.-C., Wang, C., & Sharma, R. (2021). Electron energy-loss spectroscopy for direct visualization of gas adsorption sites. *Microscopy and Microanalysis*, 27(S1), 800–801. <https://doi.org/10.1017/s1431927621003172>
- Yao, Q.-Z., Yu, M. M., Ooi, L. S. M., Ng, T. B., Chang, S. T., Sun, S. S. M., & Ooi, V. E. C. (1998). *Isolation and Characterization of a Type 1 Ribosome-Inactivating Protein from Fruiting Bodies of the Edible Mushroom (Volvariella volvacea)*.
- Zaidi, K. U., Ali, A. S., Ali, S. A., & Naaz, I. (2014). Microbial Tyrosinases: Promising Enzymes for Pharmaceutical, Food Bioprocessing, and Environmental Industry. *Biochemistry Research International*, 2014, 1–16. <https://doi.org/10.1155/2014/854687>